

## The Genus *Uraria* (Leguminosae) in China

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The genus *Uraria* in China, including Taiwan, is revised. A key to the sections and species of the genus in China with those of related species in *Desmodium* and *Christia*, correct names for the accepted species and synonyms with bibliography mainly for Chinese species, morphological descriptions, distribution, and representative specimens collected in China are included. *Uraria* and *Urariopsis* were treated as distinct in China, but they are united into *Uraria* in this paper. *Doodia picta* (Jacq.) Roxb. is designated here as lectotype of the genus. The genus *Uraria* is divided into two sections, sect. *Uraria* and sect. *Urariopsis* (Schindl.) H. Ohashi, Iokawa & Dy Phon. Section *Sinuraria* Y. C. Yang & P. H. Huang is merged with sect. *Uraria*. Of 13 species known in China including two *Urariopsis*, we accept nine as distinct species. Five species endemic to China are accepted as follows: *Uraria aequilobata* Hosok. (= *U. hamosa* Wall. var. *formosana* Matsum.), *Uraria longibracteata* Y. C. Yang & P. H. Huang and *Uraria fujianensis* Y. C. Yang & P. H. Huang are recognized as identical with *Uraria neglecta* Prain; *U. guangxiensis* W. L. Sha is treated as a synonym of *Uraria lacei* Craib; and *Urariopsis brevissima* Y. C. Yang & P. H. Huang is considered synonymous with *Uraria cochinchinensis* Schindl. *Uraria neglecta* Prain is newly recorded from China. Lectotypes of *U. hamosa* var. *sinensis* Hemsl. and *U. guangxiensis* W. L. Sha are selected. *Uraria lagopodioides* (L.) Desv. is treated to as different from *U. lagopoides* DC.

**Key words:** China, classification, endemic species, Leguminosae, *Uraria*.

*Uraria* is a genus belonging to tribe Desmodieae of the subfamily Papilionoideae, Leguminosae (Ohashi 2005). It is basically characterized in having imparipinnately 1–7(–9)-foliolate leaves, the leaflets of which have distinct principle lateral nerves extending to the margin; densely flowered long pseudoracemes with acuminate bracts longer than the flowers, paired pedicels inflex-hooked at the apex with dense long hairs, and jointed pods with folded articles. The genus comprises about 20 species distributed mainly in tropical and subtropical

regions in SE Asia, extending east to Taiwan and Japan (Ryukyus), south to northern Australia, and disjunctively in Africa. The center of diversity is considered to be India to Indo-China (Ohashi 2005).

Many species of *Uraria* have been recorded in China. The genus was first compiled by Yang and P. H. Huang (1981) and their results were adopted in *Flora Reipublicae Popularis Sinicae* vol. 41 Leguminosae (3) in 1995. They recognized nine species of *Uraria* and two of *Urariopsis*. T. C. Huang and Ohashi (1993) compiled the

genus in Taiwan and recognized four species. Aside from three species common in both works, *Uraria aequilobata* Hosokawa was regarded as a synonym of *Uraria lagopodioides* (L.) Desv. ex DC. by Yang and P. H. Huang (1981, 1995), but was treated as a distinct species endemic to Taiwan and Hongkong by Huang and Ohashi (1993). *Uraria guangxiensis* W. L. Sha was described from Guangxi (Sha 1994), but is not included in the Fl. Reipubl. Popul. Sin. **41** (1995). Accordingly, 11 species of *Uraria* and two of *Urariopsis* are recorded in China as indigenous. However, *Uraria* and *Urariopsis* were regarded as congeneric by De Haas et al. (1980) and this broad circumscription of *Uraria* has been accepted by Dy Phon (1987) and Ohashi (2005). We follow *Uraria* s. l. in this work. Therefore, 13 species of *Uraria* are known in China at present.

Recently, *Uraria* has been studied in Indochina (Dy Phon 1987, Lock and Heald 1994), Bhutan (Grierson and Long 1987), India (Sanjappa 1992), and South Asia (Kumar and Sane 2003). Dy Phon (1987) revised *Uraria* in Cambodia, Laos and Vietnam and recognized 13 species including *Uraria campanulata* (Benth.) Gagnep. which is recognized here as *Christia campanulata* (Benth.) Thoth. and is excluded from *Uraria* following the previous treatments in floras of Taiwan (Huang and Ohashi 1977, 1993) and China (Yang and Huang 1981, 1995). Of the 12 species of *Uraria* in Indochina (Dy Phon 1987) six are common with China, i. e., *U. cordifolia* Wall., *U. crinita* (L.) Desv. ex DC., *U. lacei* Craib, *U. lagopodioides* (L.) Desv. ex DC., *U. picta* (Jacq.) Desv. ex DC. and *U. rufescens* (DC.) Schindl. Kumar and Sane (2003) enumerated 14 species from South Asia consisting of Bangladesh, India, Myanmar, Nepal, Sikkim, and Sri Lanka. Except for *Uraria campanulata*, seven species of the 13 recorded in South Asia are

distributed also in China. Six of these are common with those in Indochina as listed above and another is *U. sinensis* Franch.

Five endemic species are recorded from China. Of the five, three are included in Yang and Huang's works (1981, 1995): *Uraria fujianensis* Y. C. Yang & P. H. Huang, *Uraria longibracteata* Y. C. Yang & P. H. Huang and *Urariopsis brevissima* Y. C. Yang & P. H. Huang. *Uraria aequilobata* Hosokawa and *U. guangxiensis* W. L. Sha are also endemic to China. The same numbers of endemic species were recorded in Indochina (Dy Phon 1987) and South Asia (Kumar and Sane 2003). Of the 12 species, five were endemic to Indochina: *U. acaulis* Schindl., *U. balansae* Schindl., *U. cochinchinensis* Schindl., *U. pierrei* Schindl. and *U. poilanei* Dy Phon. Of the 13 species five were endemic to South Asia: *U. acuminata* Kurz., *U. barbaticaulis* Iokawa, T. Nemoto & H. Ohashi (= *U. barbata* Lace), *U. kurzii* Schindl., *U. lagopus* DC. and *U. prunellifolia* Baker. In fact, *U. cochinchinensis* and *U. kurzii* should be excluded from their lists, because the former is already known in China and the latter is considered synonymous with *U. cordifolia* Wall. These features of endemic species may suggest interesting relationships in taxonomy and species diversity of *Uraria* in the regions from India to southern China. We have been interested in Chinese *Uraria* especially those endemic to China.

The Chinese endemic species need to be revised, because they have not been critically compared with species of other regions. It is the same as to the Chinese species common with other regions in the same reason. We also need to prepare a regional treatment on the Chinese species as a precursor to the treatment for the Flora of China project. Based on our field observations of living plants of *Uraria* in China and Taiwan as well as neighboring regions and examination of herbarium specimens in A, BKF, CAL, GH,

IBK, IBSC, K, KYO, NA, P, PE, TAI, TI, and TUS, all the species of *Uraria* in China are treated in this paper.

### The genus *Uraria*

***Uraria*** Desv. in J. Bot. Appl. 1: 122, t. 5, f. 19 (1813) [Type: *Uraria picta* (Jacq.) Desv. ex DC. (*Hedysarum pictum* Jacq.). Lectotype designated by Hutchinson, Gen. Flow. Pl. 1: 482 (1964)]; DC. [in Ann. Sci. Nat. (Paris) 4: 100 (1825)], Prodr. 2: 324 (1825); Benth. in Benth. & Hook. f., Gen. Pl. 1: 521 (1865); Baker in Hook. f., Fl. Brit. Ind. 2: 155 (1876); Taub. in Engler & Prantl, Nat. Pflanzenfam. 3, 3: 330 (1894); Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66: 379 (1897); Merr. in Philipp. J. Sci., C. 5: 93 (1910); Gagnep., Fl. Gén. Indoch. 2: 538 (1920); Merr., Enum. Philipp. Flow. Pl. 2: 293 (1923); Schindl. in Repert. Spec. Nov. Regni Veg. Beih. 49: 363 (1928); van Meeuwen in Reinwardtia 5: 450 (1961); Backer & Bakh. f, Fl. Java 1: 610 (1963); Hutchinson, Gen. Flow. Pl. 1: 481 (1964); Haas, Bosman & Geesink in Blumea 26: 439 (1980); H. Ohashi, Polhill & Schubert in Adv. Leg. Syst. 1: 299 (1981); Y. C. Yang & P. H. Huang in Bull. Bot. Res. N.E. Forest. Inst., Harbin 1: 5 (1981); Allen & Allen, Leg.: 672 (1981); Dy Phon in Fl. Cambodge Laos Vietnam 23: 95 (1987); Y. C. Yang & P. H. Huang in Fl. Reipubl. Popul. Sin. 41: 66 (1995); H. Ohashi in Sci. Rep. Tohoku Univ. ser. 4, Biol. 40: 251 (1999); Ye & H. Ohashi in J. Jpn. Bot. 77: 150 (2002); H. Ohashi in Lewis et al., Leg. World: 443 (2005).

***Doodia*** Roxb., Fl. Ind. ed. 2, 3: 365 (1832) [Type: *Doodia picta* (Jacq.) Roxb., lectotype species designated here], non R. Br. (1810).

***Urariopsis*** Schindl. in Bot. Jahrb. Syst. 54: 51 (1916) [Type: *Urariopsis cordata* (Wall.) Schindl.], & in Repert. Spec. Nov. Regni Veg. Beih. 49: 368 (1928); Backer & Bakh. f, Fl. Java 1: 611 (1963); H. Ohashi,

Polhill & B. G. Schubert in Adv. Leg. Syst. 1: 299 (1981); Allen & Allen, Leg.: 673 (1981); Y. C. Yang & P. H. Huang in Fl. Reipubl. Popul. Sin. 41: 75 (1995).

Perennial herbs or subshrubs, erect, rarely decumbent or climbing. Leaves stipulate, 1-foliolate or imparipinnately 3- or 5-9-foliolate with often 1- or 3-foliolate leaves on upper stem or young plants; leaflets usually longer than wide, rarely as long as wide; stipules free, striate, acuminate to caudate; stipels persistent, striate.

Inflorescence a spike-like pseudoraceme or panicle, mostly terminal, sometimes terminal and axillary, usually densely flowered; flowers geminate at a node; pedicels densely hairy, accrescent, mostly incurved upward at apex. Primary bracts ovate or broadly ovate with a long acuminate or caudate apex, deciduous or persistent, imbricate; secondary bracts and bracteoles absent. Calyx 5-lobed, upper two lobes more or less connate at base, lower 3 lobes usually longer than upper two, the lowest one often much longer than others. Corolla variously colored, commonly yellow, pink or purple. Standard orbicular to broadly obovate, apex obtuse to retuse, base attenuate, usually long-clawed; wings auriculate, shortly clawed, usually shorter than keel; keel-petals short, subsessile, apex obtuse or rarely apiculate. Stamens diadelphous, vexillary one free; anthers uniform, basifixed; ovary sessile with 2-9 ovules; style usually longer than ovary and slightly dilated above the curvature; stigma terminal, capitate and minute.

Pods jointed, plicate or peltate, exserted from or included in persistent calyx; articles inflated, one-seeded, indehiscent, connected at both ends or at center of lateral surfaces, pubescent or glabrous. Seeds reniform or quadrate, with a scarce rim-aril around hilum.

Pollen morphology: Huang (1968), Ohashi (1971), Liu and Huang (1999) and Ye and Ohashi (2002).

Chromosome numbers  $x = 10, 11$ ;  $2n = 20, 22$ .

Distribution. Africa, Asia and northern Australia. Asia: Pakistan, Sri Lanka, India, Nepal, Sikkim, Bhutan, Bangladesh, Myanmar, Thailand, Laos, Cambodia, Vietnam, China, Taiwan, Japan (southern Ryukyus), Malesia and Pacific Isl.

### Infrageneric system

Schindler (1925) described two subgenera of *Uraria*, i. e., subgen. *Desmodiastrum* Schindl. based on *U. henryi* Schindl. and subgen. *Cyclodesmus* Schindl. based on *U. prunellifolia* Graham ex Baker. The former was suggested by Ohashi et al. (1981) as it belongs to *Desmodium* and *U. henryi* Schindl. was regarded as a synonym of *Desmodium hispidum* Franch. (Ohashi et al. 2002). The latter species may be also recognized as a member of *Desmodium*, because the pods of *U. prunellifolia* are not plicated but are perfectly straight.

Yang and Huang (1981) recognized *Uraria* and *Urariopsis* as distinct, and divided *Uraria* into two sections, i. e., sect. *Uraria* and sect. *Sinuraria* Y. C. Yang & P. H. Huang based on *U. sinensis* (Hemsl.) Franch. They distinguished sect. *Sinuraria* from sect. *Uraria* by the lax flowered inflorescences, triangular or ovate calyx-lobes, and the lowest calyx-lobes equal to or shorter than the calyx-tube. However, these characters in *U. sinensis* are not distinct from *U. rufescens* which is most closely related to the species and is distributed widely from India to China showing wide morphological variation in these characters. Section *Sinuraria* is included in section *Uraria*, although the species has unique, apiculate keel-petals (Iokawa and Ohashi in prep.).

The genus is divided into two sections in this paper, i. e., sect. *Uraria* based on *Uraria picta* (Jacq.) Desv. ex DC., type of the genus, and sect. *Urariopsis* (Schindl.) H. Ohashi, Iokawa & Dy Phon based on *Uraria*

*cordifolia* Wall. as follows:

1. *Uraria* sect. **Uraria** [Type: *Uraria picta* (Jacq.) Desv. ex DC.]: Y. C. Yang & P. H. Huang in Bull. Bot. Res. N.E. Forest. Inst., Harbin 1: 8 (1981).

*Uraria* sect. *Sinuraria* Y. C. Yang & P. H. Huang in Bull. Bot. Res. N.E. Forest. Inst., Harbin 1: 16 (1981) [Type: *Uraria sinensis* (Hemsl.) Franch.].

2. *Uraria* sect. **Urariopsis** (Schindl.) H. Ohashi, Iokawa & Dy Phon, stat. nov.

*Urariopsis* Schindl., Bot. Jahrb. Syst. 54: 51 (1916) [Type: *Urariopsis cordata* (Wall.) Schindl. (= *Uraria cordifolia* Wall.)].

### Key to the sections and species of *Uraria* of China with related species of *Desmodium* and *Christia*

1. Articles peltate each other, i. e., connected centrally on the facing flat sides; leaves 1-foliolate (sect. *Urariopsis*) ..... 2
1. Articles plicate, i. e., connected at both ends in a zigzag arrangement; leaves odd-pinnate, more than 3-foliolate but sometimes mixed with 1-foliolate leaves or rarely only 1-foliolate (sect. *Uraria*) ..... 3
2. Leaflets usually obtuse at apex; inflorescences simple, usually more than 10 cm long; flowers dense and compact ..... *U. cordifolia*
2. Leaflets acute at apex; inflorescences branched, usually less than 10 cm long; flowers lax ..... *U. cochinchinensis*
3. Flowers fasciculate at a node of inflorescences; pods zigzag when young then straight ..... *Desmodium hispidum*
3. Flowers 2 at a node of inflorescences; pods always zigzag ..... 4
4. Leaves 5–7(–9)-foliolate, sometimes mixed with (1–)3-foliolate leaves ..... 5
4. Leaves 3-foliolate, often 1-foliolate on upper part of stem ..... 6
5. Leaflets linear to narrowly oblong, usually variegated along midrib above, lateral nerves looped with margin; pedicels 5–9 mm long in fruit; lateral and lowest calyx-

- lobes not elongate after anthesis, 2–4 mm long; leaves (1–)3-foliolate on lower part of stem ..... *U. picta*
5. Leaflets narrowly ovate to ovate, narrowly elliptic to elliptic or oblong, without variegated area, lateral nerves extending to margin; pedicels 12–15 mm long in fruit; lateral and lowest calyx-lobes elongate to 5–6 mm long after anthesis; leaves sometimes (1–)3-foliolate on upper part of stem ..... *U. crinita*
6. Inflorescence usually a terminal panicle; with dense glandular hairs 1–2 mm long on inflorescence-rachis, pedicels and calyx; pods shortly pubescent .... *U. lacei*
6. Inflorescences usually simple, sometimes with elongate branches but not paniculate; glandular hairs present or absent on inflorescence-rachis, pedicels and calyx; pods glabrous or pubescent ..... 7
7. Lateral and lowest calyx lobes more than 2 times as long as the upper lobes; inflorescences short, usually 3–6 cm long, densely flowered; bracts persistent, patent at apex; leaflets usually orbicular to broadly ovate ..... *U. lagopodioides*
7. Lateral and lowest calyx lobes less than 2 times as long as the upper lobes; inflorescences usually longer than 6 cm, densely or loosely flowered; bracts deciduous or persistent, erect along inflorescence when persistent; leaflets basically oblong to ovate, rarely (in *U. sinensis*) broadly obovate or obcordate, truncate or emarginate at apex ..... 8
8. Calyx accrescent, papery with reticulate veins, enveloping fruit; without glandular hairs on inflorescence-rachis, pedicels and calyx ..... *Christia campanulata*
8. Calyx not accrescent, not reticulately veined, not enveloping fruit; with glandular hairs on inflorescence-rachis, pedicels and calyx ..... 9
9. Inflorescence-rachis, pedicels and calyx densely covered with patent glandular hairs 1–2 mm long; pods glabrous; inflorescences densely flowered; bracts 9–18 mm long ..... *U. neglecta*
9. Inflorescence-rachis, pedicels and calyx without or with only sparse glandular hairs 1–2 mm long; pods short hairy; inflorescences more or less loosely flowered; bracts usually less than 13 mm long ..... 10
10. Keel-petals obtuse at apex; pedicels 5–6 mm long in flower, recurved after anthesis; calyx-lobes narrowly triangular, acuminate; pods minutely hairy; leaflets obtuse to acute or rarely rounded at apex ..... *U. rufescens*
10. Keel-petals apiculate at apex; pedicels 7–8 mm long in flower, not recurved after anthesis; calyx-lobes triangular to broadly ovate, acute; pods with long glandular hairs; leaflets obtuse to truncate or emarginate at apex ... *U. sinensis*

### Enumeration of species

1. *Uraria cochinchinensis* Schindl. in Repert. Spec. Nov. Regni Veg. **21**: 14 (1925) [Type: Vietnam. Baria. Pierre s. n. Aug. 1866 (P, lectotype designated by Dy Phon, 1987); A, GH, isoelectotypes], & in Hand.-Mazz., Symb. Sin. **7**: 571 (1933); Dy Phon in Fl. Cambodge Laos Viêtname **23**: 97, pl. 16 (1987). [Fig. 1]

*Urariopsis brevissima* Y. C. Yang & P. H. Huang, Bull. Bot. Lab. N.E. Forest Inst., Harbin **8**: 7 (1980) [Type: China. Yunnan. P. I. Mao 3142 (PE, holotype)], & in Fl. Reipubl. Popul. Sin. **41**: 78, tab. 14 (1995), syn. nov.

*Uraria collettii* auct. non Prain: Gagep., Fl. Gén. Indoch. **2**: 548 (1920).

Erect herb or subshrub, 0.6–1 m tall; stems flexible, with dense yellowish hairs. Leaves unifoliolate, chartaceous, 5–11 cm long, 5–8 cm wide, cordate at base, acute-acuminate at apex, both surfaces patent-pubescent; lateral nerves 8–10 on each side of midrib, extending to margin; secondary nerves connect lateral nerves. Petioles 3–7

cm long; petiolules 2–4 mm long. Stipules caducous, ca. 5 mm long, 1.5 mm wide; stipels persistent, 2–5 mm long.

Inflorescences short, axillary or terminal, branched, loosely flowered, 4–15 cm long, rachis densely spreading-hairy with long, yellowish glandular hairs and long and short straight hairs. Pedicels 10–12 mm long in flower, ca. 20 mm long and incurved upwardly in fruit, densely patent hairy. Bracts ovate, acuminate, imbricate, early caducous, 9–20 mm long, long glandular hairs along margin. Flowers small. Calyx campanulate, hairy, 3–4 mm long; tube ca. 2 mm long, 5-lobed; lobes free, upper two somewhat shorter than lower three, ca. 3 mm long, hairy outside and along margin, with long yellowish glandular hairs and shorter straight and hooked hairs. Corolla yellow; standard orbicular to obovate, 6–7.5 mm long, 5 mm wide; wings curved, 4.5–6 mm long, 1.5 mm wide; keel-petals slightly clawed, auriculate, ca. 5.5 mm long, 1 mm wide. Ovary ca. 3 mm long, 3–4 ovulate, 1/2 as long as style.

Pods minutely hairy; articles 3–4, peltate, orbicular, reticulate, terminated by a central joint, ca. 3 mm long, 2.8 mm wide; seeds cordiform, smooth, reddish, 2 mm in diameter, 1.5 mm thick.

Distribution: Cambodia, Laos, Vietnam and southern China.

Specimens examined. CHINA. **Guangdong**. P. Y. Chen 2 (PE), 761 (PE). **Guangxi**. C. C. Chang 13357 (IBK, PE). **Yunnan**. P. I. Mao 3142 (PE, holotype of *Urariopsis brevissima* Y. C. Yang & P. H. Huang), P. I. Mao 5322 (PE).

This species was reported by Schindler from Yunnan in 1933 – the first record of the species in China. However, it was recorded as endemic to Indochina (Dy Phon 1987, Lock and Heald 1994).

2. *Uraria cordifolia* Wall., Icon. Pl. Asiat. Rar. 1: 33, tab. 37 (1830) [Type: Wallich 5679A (K)]; De Haas, Bosman & Geesink in *Blumea* 26: 439 (1980); Dy Phon in Fl.

Cambodge Laos Vietnam 23: 98 (1987).

[Fig. 2]

*Uraria cordata* Wall. [Cat. n. 5679 A (1831), nom. nud.] ex Steudel, Nom. ed. 2, 2: 732 (1841), nom. illeg.

*Uraria latifolia* Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66: 383 (1897).

*Uraria collettii* Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66: 383 (1897), syn. nov.

*Urariopsis cordifolia* (Wall.) Schindl. in Bot. Jahrb. Syst. 54: 51 (1916) & in Repert. Spec. Nov. Regni Veg. 21: 16 (1925); Fl. Illust. Pl. Primar. Sinica. Legum. 513, fig. 507 (1955); Icon. Cormophyt. Sin. 2: 457, fig. 2643 (1972); Y. C. Yang & P. H. Huang in Fl. Reipubl. Popul. Sin. 41: 77 (1995); P. H. Huang in P. Q. Li & al., Higher Pl. China 7: 172, fig. 259 (2001).

*Urariopsis cordifolia* (Wall.) Schindl. var. *collettii* (Prain) Schindl. in Repert. Spec. Nov. Regni Veg. 21: 16 (1920), syn. nov.

*Uraria kurzii* Schindl. in Repert. Spec. Nov. Regni Veg. 21: 15 (1925), syn. nov.

Herbs or small shrubs, 0.8–1 m tall; stems strong, cylindrical, yellowish velvety. Leaves unifoliate, broadly ovate, base rounded or cordate, apex acute to obtuse, 8–20 cm long, 6–14 cm wide, upper surface sparsely to uniformly appressed-hairy on nerves, lower surface more densely; lateral nerves 8–12 on each side of midrib, prominent, extending to margin, cancellate nerves more or less prominent. Petioles 3–7 cm long, hairy like on stem; petiolules 5 mm, hairy. Stipules ovate, acuminate, hairy, 10–15 mm long; stipels 5 mm long.

Inflorescence a simple pseudo raceme, 15–30 cm long, 2–3 cm wide, rachis densely patent long glandular yellow hairy. Pedicels geminate, densely patent hairy, 10–12 mm long, incurved upward after anthesis. Bracts broadly ovate, acuminate, ca. 3.5 mm wide, hairy abaxially, densely ciliate. Flowers white or rose. Calyx densely hairy, 5–6 mm long, tube about 1.5 mm, 5-lobed; lobes

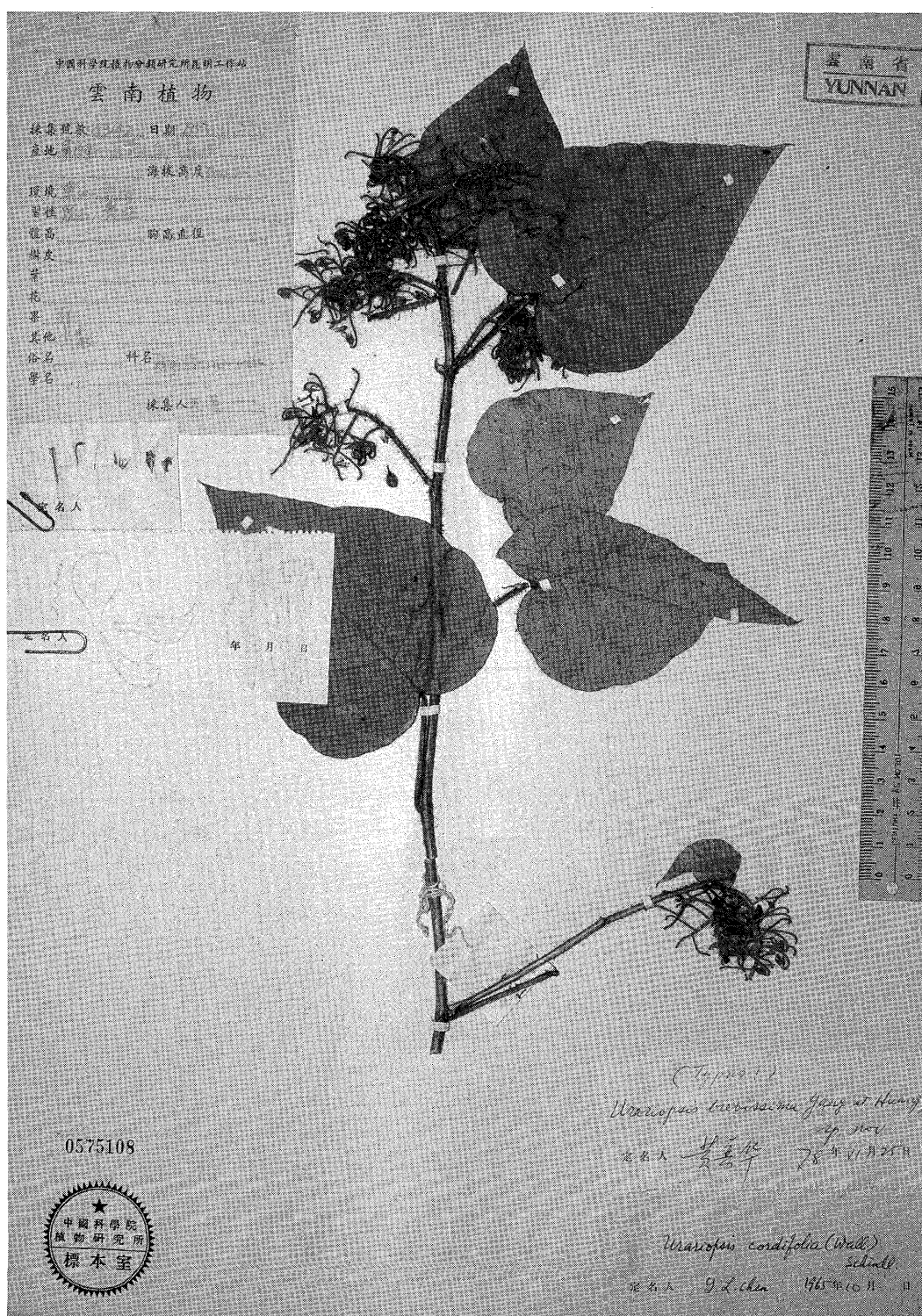


Fig. 1. *Uraria cochinchinensis* Schindl. Holotype of *Urariopsis brevissima* Y. C. Yang & P. H. Huang in PE.

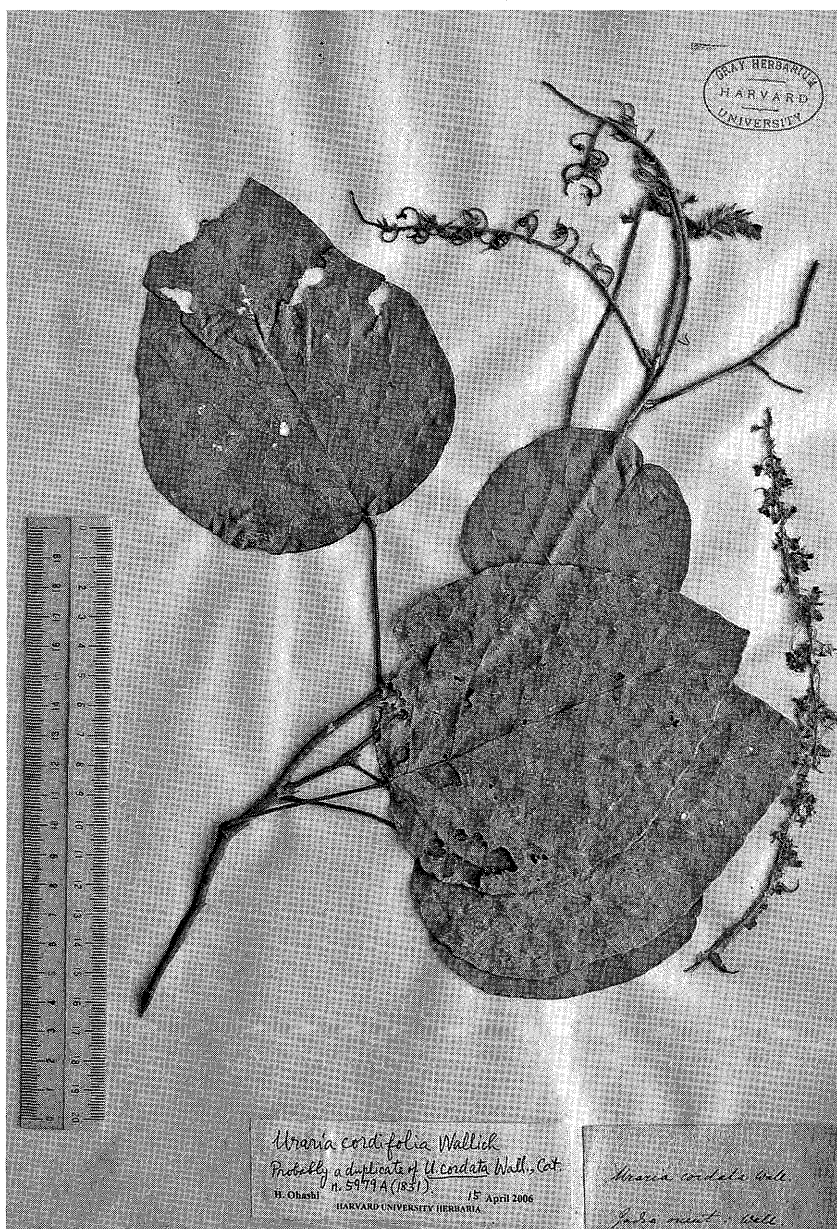


Fig. 2. *Uria cordifolia* Wallich. Probable isotype: Wallich 5679A (GH).

subequal, upper 2 lobes connate to half, 2-toothed at apex, lower narrowly triangular, acuminate, 4–5 mm long. Corolla 5–6 mm long; standard obovate, 4–5 mm long; wings ca. 5 mm long, 1–2 mm wide, sessile,

auriculate; keel-petals obtuse at apex. Ovary 3–5 mm long, hairy, 2–4 ovulate; style ca. 8 mm long.

Pods brownish or black, minutely hairy, included in calyx; articles 2–4, peltate; seeds

elliptic ca. 2 mm long, 1.5 mm wide, 1 mm thick.

Distribution: Myanmar, Thailand, Cambodia, Laos, Vietnam, southern China and Malesia.

Specimens examined. CHINA. Gwangxi. W. H. Soo 67646 (PE); C. F. Liang & D. L. Woo 32277 (PE); Li 474 (IBK, PE). Yunnan. C. W. Wang 20550 (PE).

3. *Uraria crinita* (L.) Desv. [in J. Bot. Appl. 1: 123 (1813), nom. nud.] ex DC., Prodr. 2: 324 (1825); Benth., Fl. Hongk. 81 (1861); Forbes & Hemsl. in J. Linn. Soc. Bot. 23: 177 (1887); Matsum. in Sci. Coll. Imp. Univ. Tokyo 12 [in Ito & Matsum., Tent. Fl. Lutchu.]: 410 (1899); Fl. Illust. Pl. Primar. Sinica. Legum. 509, fig. 504 (1955); W. Y. Chun & C. C. Chang, Fl. Hainan. 2: 284 (1965); T. C. Huang & H. Ohashi, Fl. Taiwan 3: 399, pl. 657 (1977); Y. C. Yang & P. H. Huang in Bull. Bot. Res. N.E. Forest. Inst., Harbin 1: 9 (1981); Dy Phon in Fl. Cambodge Laos Vietnam 23: 115 (1987); Fl. Fujian. 3: 149, fig. 108 (1987); H. Ohashi, Tateishi, Nemoto & Endo in Sci. Rep. Tohoku Univ. ser. 4, Biol. 39: 240 (1988); T. C. Huang & H. Ohashi in Fl. Taiwan ed. 2, 3: 379, pl. 198 (1993); Y. C. Yang & P. H. Huang in Fl. Reipubl. Popul. Sin. 41: 68 (1995); P. H. Huang in P. Q. Li & al., Higher Pl. China 7: 169, fig. 254, photo 84 (2001).

[Figs. 3, 4]

*Hedysarum crinitum* L., Syst. Nat. ed. 12, 2: 495 (1767), & Mant. Pl. 102 (1767) [Type: Herb. Linn. No. 921.70 (LINN, lectotype designated by Dy Phon & Adema in Taxon 46: 471. 1997)].

*Hedysarum comosum* Vahl, Symb. 2: 84 (1791).

*Doodia crinita* (L.) Roxb., Fl. Ind. ed. 2, 3: 369 (1832).

*Uraria comosa* (Vahl) DC., Prodr. 2: 324 (1825).

*Uraria crinita* (L.) Roxb. var. *macrostachya* Wall., Icon. Pl. Asiat. Rar. 2: 8, tab. 110 (1830) [Type: Wallich 5675 I

(K)]; Fl. Illust. Pl. Primar. Sinica. Legum. 509, fig. 505 (1955); W. Y. Chun & C. C. Chang, Fl. Hainan. 2: 284 (1965).

*Uraria cornosa* Spanoghe in Linnaea 15: 193 (1841).

*Uraria macrostachya* (Wall.) Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66: 380 (1897), as *Uraria macrostachya* Wall.; Schindl. in Repert. Spec. Nov. Regni Veg. Beih. 49: 366 (1928); Hosok. in J. Soc. Trop. Agr. 4: 314 (1932); C. C. Chuang & C. Huang, Leg. Taiwan Past. Soil Impr. 100, fig. 151 (1966).

Erect undershrubs, 0.5–2 m tall; stems strong, cylindrical, short-hairy with hooked hairs. Leaves 5–7 foliolate, often mixed with 3-foliate ones or rarely 1-foliate on upper stem; leaflets variable, usually narrowly ovate to ovate or ovate-oblong, sometimes elliptic, broadly ovate or somewhat obovate, apex obtuse to acute or mucronate, base rounded, upper surface glossy and glabrous, lower surface pale and minutely hairy, with some hairs along nerves; lateral nerves distinct, 6–8 on each side of midrib, ascending, extending to or looped within margin; secondary nerves prominent, reticulate with succeeding ordered nerves, terminal one 7–18 cm long, 3–7 cm wide, lateral ones usually almost equal length with the terminal one but typically narrower. Petioles 5–13 cm long; rachis usually 5–8 cm long in 5–7 foliolate leaves; petiolules 2–3 mm long, hairy. Stipules deciduous, broadly triangular, acuminate, 10–15 mm long, 3–10 mm wide at base; stipels 3 mm long.

Inflorescences long-pseudoracemose, terminal or terminal and axillary, simple, compact, 15–40(–60) cm long, 2–3 cm wide. Pedicels geminate, 6–12 mm long in flower, 12–15 mm long in fruit, hairy with long hyaline glandular and short uncinat hairs, incurved upward in fruit. Bracts deciduous, narrowly ovate, acuminate, 10–20 mm long, 5 mm wide, imbricate, hairy. Calyx campanulate, whitish or greenish; tube ca. 2

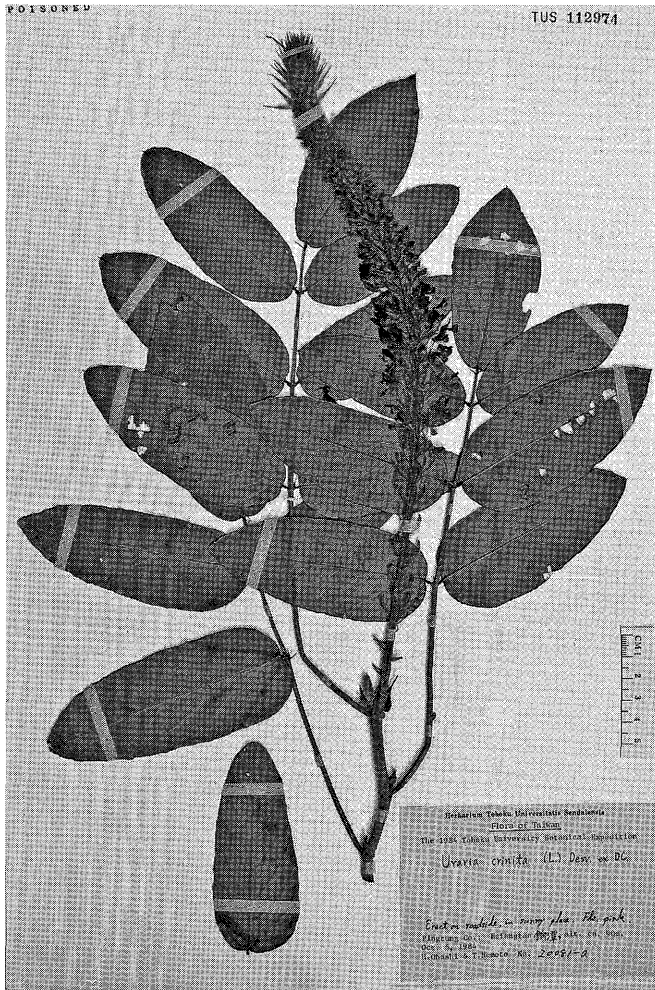


Fig. 3. *Uraria crinita* (L.) Desv. ex DC. Taiwan. Ohashi & Nemoto 200081-a (TUS), a form referable to *U. macrostachya* (Wall.) Prain.

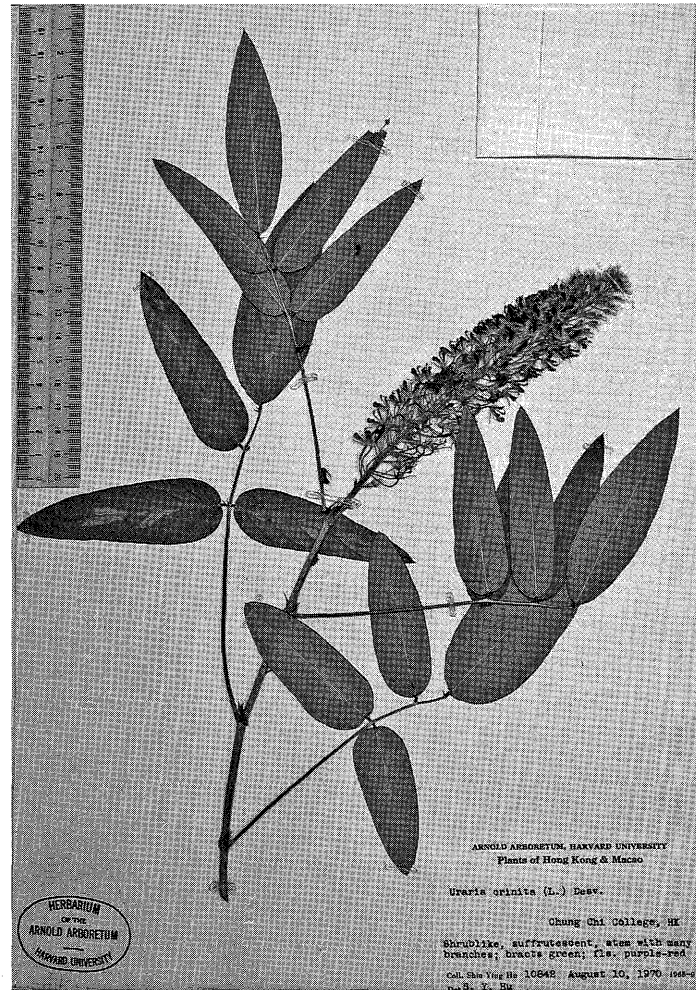


Fig. 4. *Uraria crinita* (L.) Desv. ex DC. Hongkong. S. Y. Hu 10842 (A), a form with narrowly ovate acute leaflets.

mm long; lobes unequal, hairy along margin with long spreading hyaline hairs, upper lobe more or less entire, 1–2 mm long, lower 4–5 mm long in flower, 5–6 mm long in fruit. Corolla rosy or violet, 7–9 mm long; standard orbicular, slightly clawed, ca. 7 mm wide; wings subsessile, 6–6.5 mm long, 2–2.5 mm wide; keel-petals as long as or slightly longer than wings, long-clawed. Ovary 1/3 as long as style, ovules 5–7; style flattened at apex.

Pods bright yellowish or grayish when mature, with 5–6 articles, glabrous or puberulent; articles 2.5–3.5 mm long, ca. 2.5 mm wide. Seeds reniform, 2–2.5 mm long, 1.7–2 mm wide.

Distribution: India, Bangladesh, Myanmar, Thailand, Cambodia, Laos, Vietnam, Malesia, southern China, Taiwan, and Japan (southern Ryukyus).

Representative specimens examined: CHINA. Fukien. Amoy. H. H. Chung 4655 (A), 5783 (A). Gwangsi. S.K. Lau 4222 (GH), W.T. Tsang 23895 (A). Hainan. H. Fung 20277(GH); F. C. How 71547 (A); T. Tuyama & al. 81500 (TI, TUS). Hongkong. C. Wright s. n. (GH), Hance 927 (GH), Y. W. Taam 1429 (A), Hu & But 21959 (A), 20896 (A), 22343(A). Taiwan. Ueno 2 anno 1898 (TI); T. Kawakami & B. Hayata s. n. anno 1908 (TI); Matuda-Eizi Leg. 6, anno 1919 (TI); T. C. Huang & al. 16129 (A, TUS); Namba & al. s. n. anno 1968 (TI); H. Ohashi & al. 23796 (TUS), 24056 (TUS); H. Ohashi & T. Nemoto 20081 (TUS), 20153 (TUS); Y. Tateishi & Y. Endo 20235 (TUS); Y. Tateishi & al. 25372 (TUS), Y. Tateishi & T. Kajita 25031 (TUS). Yunnan. C. W. Wang 79145, 80455 (A).

*Uraria crinita* (L.) Desv. ex DC. var. *macrostachya* Wall. is based on specimen Wallich 5675 I (K) which was a plant cultivated in Calcutta Botanic Garden derived from seeds collected in China. *Uraria macrostachya* Wall. is, according to Prain (1897), a name not accepted by Wallich and is regarded as an erroneously printed name under plate 110. Prain (1897) gave a detailed note and assessment of historical treatments between *U. crinita* and *U. macrostachya*. He considered *U. crinita* var. *macrostachya*

Wall. as a distinct species and adopted *U. macrostachya* Wall. for the species. The name is considered a new combination by Prain, hence the author of the name should be Prain, as *U. macrostachya* (Wall.) Prain.

Prain (1897) characterized *Uraria macrostachya* in having broadly ovate, subacute leaflets, long, spreading hairs on the pedicels and yellowish glabrous articles and recorded it from China and Myanmar. However, *U. crista* appears to be very polymorphic showing wide ranges of morphological variation. Plants with acute leaflets are often found sporadically in southern China, Thailand and Myanmar. Pods are glabrous or puberulent, but have been described as shortly pubescent (Yang and Huang 1995). *Uraria crinita* and *U. macrostachya* need to be reexamined in future.

4. *Uraria lacei* Craib in Bull. Misc. Inform. 1910: 276 (1910); Y. C. Yang & P. H. Huang in Bull. Bot. Res. N.E. Forest. Inst., Harbin 1: 16 (1981); Dy Phon in Fl. Cambodge Laos Vietnam 23: 110 (1987); Y. C. Yang & P. H. Huang in Fl. Reipubl. Popul. Sin. 41: 73 (1995). [Fig. 5]

*Uraria paniculata* Clarke in J. Linn. Soc. Bot. 25: 15, pl. 4 (1889), non Hassk. (1844).

*Uraria clarkei* Gagnep., Fl. Gén. Indo-Chine 2: 542 (1920); Merr. in Lingn. Sci. J. 7: 310 (1929); Fl. Illust. Pl. Primar. Sinica. Legum. 512, fig. 506 (1955); Y. C. Yang & P. H. Huang in Bull. Bot. Res. N.E. Forest. Inst., Harbin 1: 12 (1981), as “(Clarke) Gagnep.”, & in Fl. Reipubl. Popul. Sin. 41: 72 (1995), as “(Clarke) Gagnep.”

*Uraria pulchra* Haines in Kew Bull. 1921: 308 (1921).

*Uraria guangxiensis* W. L. Sha in Guihaia 14: 23 (1994) [Type: Guangxi: Nandan Xian, Yueli, 20 Sept. 1977, Exped. Nandan 4-5-073 (Lectotype in herb. Guangxi Research Centre of Natural Materia Medica). ibidem, 2 Nov. 1987, Luo Xiao Zhen & Qu Guo

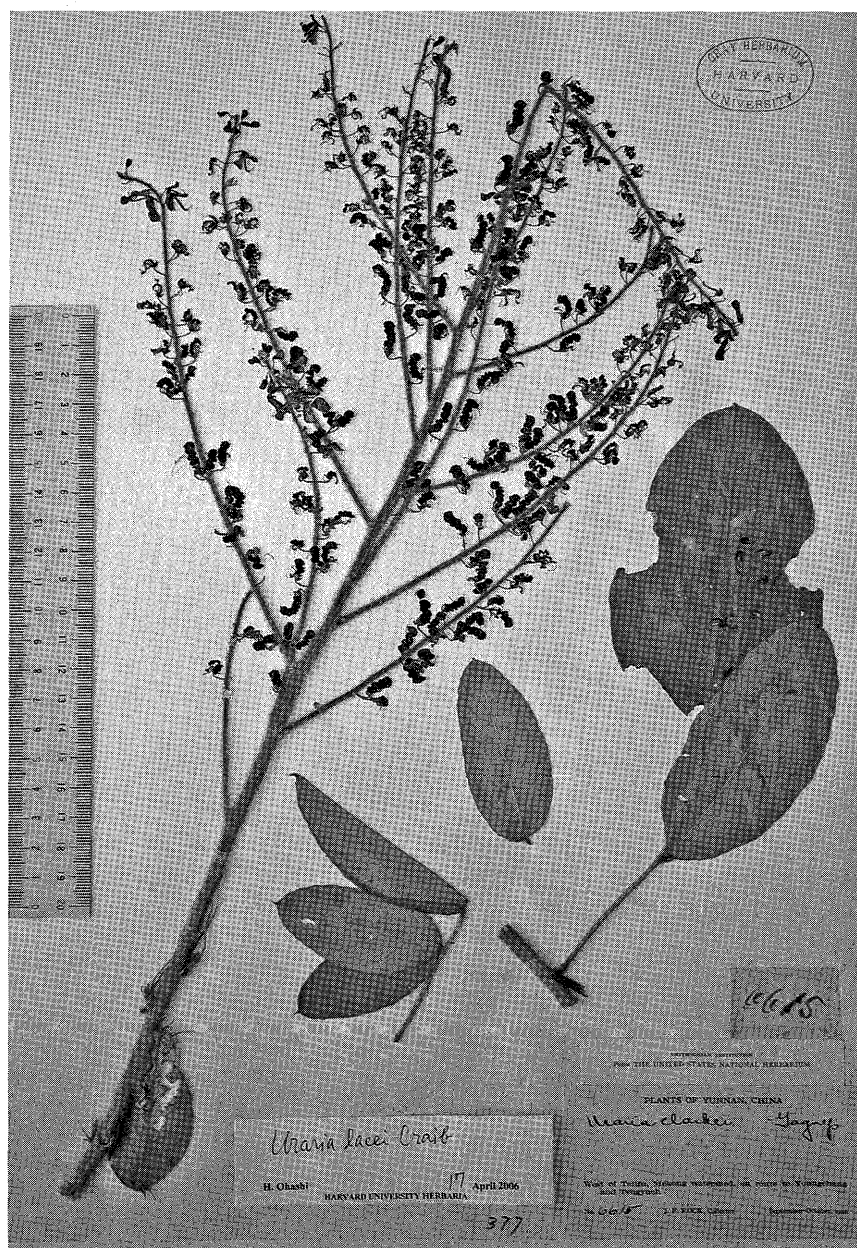


Fig. 5. *Uraria lacei* Craib. Yunnan. J. F. Rock 6615 (GH).

Zhong 0001 (Syntype in herb. Guangxi Research Centre of Natural Materia Medica)], syn. nov.

Subshrubs or herbs 1–3 m tall; stems erect, strong, covered with dense brownish

hairs, striate. Leaves trifoliate; petiole 3–4 cm long; rachis 1–2 cm long; terminal leaflet 5–12 cm long, 2.5–5 cm wide, oblong or elliptic-ovate, rounded or obtuse at both ends, apex mucronate, covered with white or

yellowish-appressed hairs, more densely hairy on lower surface: lateral nerves 12–15 on each side of midrib, ascending, extending to margin, densely hairy with yellow hairs; pulvinus ca. 3 mm long, covered with yellow hairs; lateral leaflets smaller than terminal one. Stipules triangular, caudate, hairy, 15–20 mm long, 3–5 mm wide at base; stipels like stipules, 8–10 mm long.

Inflorescence a panicle, 15–40 cm long; each branch raceme 10–20 cm long, covered with dense yellowish glandular hairs 1–2 mm long. Pedicels geminate, with dense glandular hairs 1–2 mm long, 6–8 mm long in anthesis, up to 10 mm long in fruit, slightly hooked at apex in fruit. Bracts ovate, 6–8 mm long, hairy outside, caducous. Calyx campanulate, 4–5 mm long, tube ca. 2 mm long, densely glandular hairy, 5-lobed; lobes hairy abaxially, upper entire or 2-toothed, lateral and lowest triangular, 2–2.5 mm long. Corolla pink, violet, bluish violet or dark blue; standard suborbicular, ca. 5.5 mm long; wings ca. 3.5 mm long, lamina 1.5 mm wide, adaxially auriculate at base; keel-petals curved, ca. 5 mm long, auricles 1 mm long. Ovary 6–9 ovulate, hairy, as long as style, ca. 6 mm long.

Pods exserted, hairy with long glandular hairs and minute ones, 6–8-jointed; articles ca. 3 mm long, 2 mm wide. Seeds yellowish, subrectangular, ca. 2 mm long, 1.8 mm wide, 0.8 mm thick.

Distribution: India, Myanmar, Thailand, Laos, and Vietnam, and southern China.

Specimens examined. CHINA. **Guangdong**. Cavalerie & Fortunat 2628 (E); H. Y. Liang 61421 (IBSC). **Guangxi**. T. W. Tak & W. K. Chow 15094 (A, IBSC); Lau 4222 (USNC), 4413 (USNC); C. F. Liang 30933 (IBSC); R. C. Ching 7566 (IBSC); C. C. Chang 10840 (IBSC); T. Nemoto & al. 1006107 (IBSC, TUS). **Yunnan**, Cavalerie 4296 (K); Forrest 13596 (K); Henry 9144 (CAL), 9144A (A, E, K), 9144C (E); Rock 2492a (USNC), 6615 (GH, USNC), 6585 (USNC); H. T. Tsai 51397 (A, IBSC); C. W. Wang 79502 (A), 79752 (A), 80496 (A, IBSC), 80547 (A).

*Uraría guangxiensis* W. L. Sha was published on the basis of following two types: Guangxi: Nandan Xian, Yueli, 20 Sept. 1977, Exped. Nandan 4-5-073 (Holotypus, Fl.) and ibidem, 2 Nov. 1987, Luo Xiao Zhen & Qu Guo Zhong 0001 (Holotype Fr.). These are syntypes, hence we select here Exped. Nandan 4-5-073 (Guangxi Research centre of Natural Materia Medica) as lectotype of *Uraría guangxiensis* W. L. Sha. The species is illustrated in the original description and the illustration appears to be in a young developmental stage with inflorescences covered by bracts. This species is characteristic in having panicles, pubescent pods and oblong or elliptic-ovate leaflets. These features correspond well with *U. lacei* and therefore we consider them to be conspecific.

5. *Uraría lagopodioides* (L.) Desv. [in J. Bot. Appl. 1: 123 (1813), comb. nud.] in Mém. Soc. Linn. Paris 4: 309 (1826), as "*Uranía lagopodioides*"; Merr. in Philipp. J. Sci., C. Bot. 5: 93 (1910), & Enum. Philipp. Flow. Pl. 2: 293 (1923); Schindl. in Hand.-Mazz., Symb. Sin. 7: 571 (1933), as "DC.", & in Repert. Spec. Nov. Regni Veg. Beih. 49: 365 (1928), as "Desv. 1813"; van Meeuwen in Reinwardtia 5: 451 (1961), as "Desv. ex DC. 1825 ("*lagopoides*")"; W. Y. Chun & C. C. Chang, Fl. Hainan. 2: 283, fig. 439 (1965), as "Desv. ex DC. 1825"; Icon. Cormophyt. Sin. 2: 456, fig. 2641 (1972); T. C. Huang & H. Ohashi, Fl. Taiwan 3: 402 (1977), p. p., excl. syn. cit. *U. aequilobata* et fig. 658; Verdc., Man. New Guinea Leg. 415 (1979), as "Desv. ex DC. 1825"; Y. C. Yang & P. H. Huang in Bull. Bot. Res. N.E. Forest. Inst., Harbin 1: 10 (1981), as "Desv. ex DC."; Dy Phon in Fl. Cambodge Laos Viêt nam 23: 102 (1987), as "Desv. ex DC."; Fl. Fujian. 3: 150, fig. 109 (1987); H. Ohashi, Tateishi, Nemoto & Endo in Sci. Rep. Tohoku Univ. ser. 4, Biol. 39: 240 (1988), as "Desv. ex DC." et excl. syn. cit.

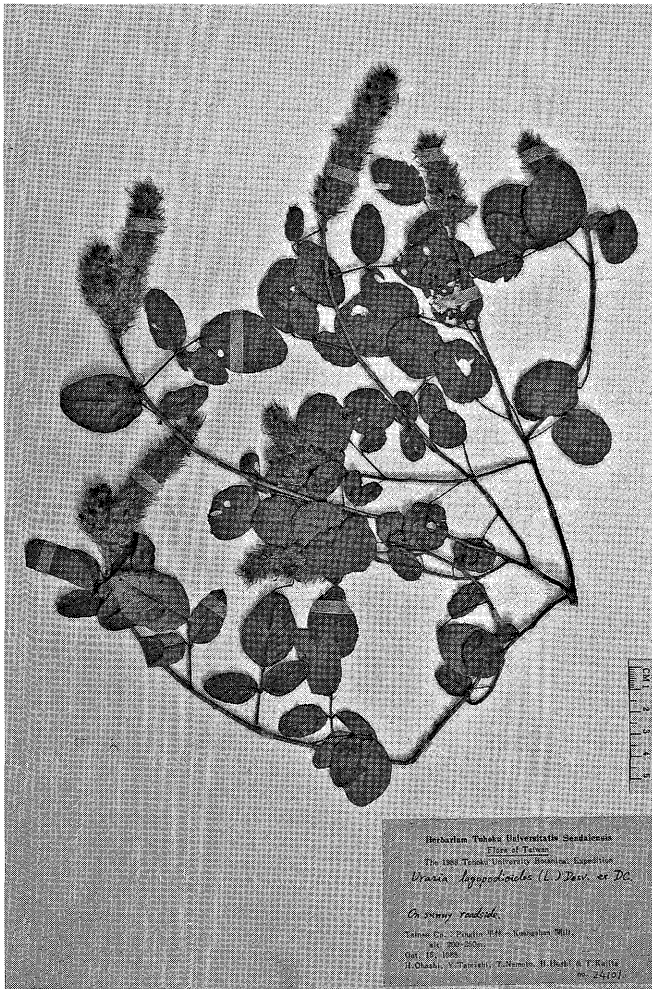


Fig. 6. *Uraria lagopodioides* (L.) Desv. Taiwan. Ohashi & al. 24101 (TUS).



Fig. 7. Infructescence of *Uraria lagopodioides* (L.) Desv. showing glabrous pods, long linear calyx lobes, and persistent long acuminate bracts with long patent glandular hairs along margin.

*U. aequilobata*; T. C. Huang & H. Ohashi in Fl. Taiwan ed. 2, 3: 379 (1993); Y. C. Yang & P. H. Huang in Fl. Reipubl. Popul. Sin. 41: 69 (1995), as "Desv. ex DC."; H. Ohashi in K. Iwats. & al., Fl. Jap. Iib: 253 (2001), as "Desv. ex DC."; P. H. Huang in P. Q. Li & al., Higher Pl. China 7: 170, fig. 255 (2001), as "Desv. ex DC." [Figs. 6, 7]

*Hedysarum lagopodioides* L., Sp. Pl. 1198 (1753) [Type: China. Yunnan, Montze. 29 Jun. 1892. Tanant (P [sheet No. 1], neotype designated by Dy Phon & Adema in Taxon 46: 471. 1997)].

*Hedysarum lagopoides* Burm. f., Fl. Ind. 168, t. 53, fig. 2 (1768), nom. superfl.

*Lespedeza lagopodioides* Pers., Syn. 2: 318 (1807), as "*lagopoides*".

*Uria cercifolia* Desv. [in J. Bot. Appl. 1: 123, tab. 5, fig. 19 (1813), nom. nud.] ex DC., Prodr. 2: 325 (1825).

*Uria lagopoides* DC., Prodr. 2: 324 (1825) [based on *Hedys. lagopoides* Burm. f., Fl. Ind. 168. t. 53. fig. 2 (1768)]; Forbes & Hemsl. in J. Linn. Soc. Bot. 23: 178 (1887); Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66: 380 (1897); Fl. Illust. Pl. Primar. Sinica. Legum. 507, fig. 502B (1955).

*Uria alopecuroides* Sweet, Hort. Brit., ed. 2, 149 (1830); Wight, Icon.: tab. 290 (1840).

*Doodia lagopodioides* (L.) Roxb., Fl. Ind. ed. 2, 3: 366 (1832).

*Doodia alopecuroides* Roxb., Fl. Ind. ed. 2, 3: 368 (1832).

*Uria repanda* Wall. ex Benth., Pl. Jungh. 213 (1852).

*Uria cylindracea* Benth., Fl. Austr. 2: 237 (1864).

*Uria lagopus* auct. non DC.: Franch., Pl. Delavay. 171 (1890).

Perennial herbs or undershrubs, prostrate, much branched at base; stems usually densely patent hairy with long glandular, long eglandular and short hairs. Leaves trifoliate, often mixed with unifoliate

leaves; leaflets ovate, orbicular to elliptic, 2.5–5(–8) cm long, 1.5–3(–6.5) cm wide, base rounded to subcordate, rarely cordate, apex obtuse to emarginate, upper surface more or less appressed hairy, rarely glabrescent, lower surface hairy; lateral nerves distinct, 6–7 on each side of midrib, extending to margin, tertiary nerves joining to lateral ones. Petiole 1.5–3 cm long, covered with short hairs. Stipules triangular, 4–5 mm long, acuminate, persistent; stipels ca. 2 mm long.

Inflorescence a terminal, pseudoracemose, densely flowered, cylindrical or ovate, 2–9 cm long, 1–2 cm wide. Pedicels hairy, 4–5 mm long in flower, 5–6 mm long in fruit, hooked at apex. Bracts persistent, broadly ovate with long acuminate to caudate apex, 6–8 mm long, grayish, abaxial surface glabrescent but densely long glandular and not glandular hairs along margin. Calyx 5-lobed, densely hairy with long glandular, eglandular, and short hooked hairs, ca. 7 mm long; tube 1 mm; lobes unequal, upper 2-toothed, teeth ca. 1 mm long, the 3 lower lobes linear, ca. 6 mm long, ciliate with long patent hairs. Corolla rosy, purple or violet, 5–6 mm long, included within calyx; standard obovate, subsessile, 4–5 mm wide; wings sessile, 2 mm wide; keel-petals long clawed. Ovary 2 mm long, 2-ovulate; style ca. 4.5 mm long.

Pods blackish when mature, glabrous, with 1–2 articles; articles ovate, swollen, reticulate, ca. 3 mm long, 2 mm wide; seeds brownish, ca. 1.4 mm long, 1 mm wide, 0.5 mm thick.

Distribution: Tropical regions of Asia and Australia. Asia: India, Nepal, Sikkim, Bhutan, Myanmar, Thailand, Cambodia, Laos, Vietnam, Malesia, southern China, Taiwan, Japan (southern Ryukyus) and Pacific Isl.

Representative specimens examined: CHINA. Guangxi. R. C. Ching 7243 (A); S. K. Lau 4386 (GH). Guangdong. C. O. Levine 364 (GH); S. K. Lau 821

(A); K.L. Shi 1703 (TUS). **Guizhou**. S. W. Teng 90796 (A). **Hainan**. S.K. Lau 6341 (A), 25815 (A); W. T. Tsang 229 (A); T. Tuyama & al. 81313 (TI, TUS), 81527 (TI, TUS). **Hongkong**. S. Y. Hu 5814 (A, K), 7728 (A, K, USNC), 8804 (A). **Taiwan**. T. C. Huang & M. J. Wu 14816 (A, TUS); M. Mizushima s. n. (TI, TUS); H. Ohashi & al. 24062-2 (TUS); H. Ohashi & T. Nemoto 20082 (TUS); C. I. Peng 14719 (A); Y. Tateishi & al. 25314 (TUS); Y. Tateishi & Y. Endo 20108 (TUS). **Yunnan**. Tanant s. n., 29.6.1892 (P, neotype of *Hedysarum lagopodioides* L.), Delavay s. n., 9.1888 (P); C. W. Wang 75565 (A), 77539 (A).

In the original description *Hedysarum lagopodioides* L. was recorded as "Habitat in China. Osbeck.", but a specimen or document of the Osbeck was not found (Turland and Jarvis 1997). Burman (1768) named a plant from India *H. lagopoides* with citation of the Linnaeus's name. *Hedysarum lagopoides* Burm. f. is, therefore, a different name from *H. lagopodioides* L. and is superfluous.

Desvaux (1813) cited *Hedysarum lagopodioides* L. in his *Uraría*, but did not proposed a definite combination before 1826.

Candolle (1825) based his combination on *H. lagopoides* Burm. f., i. e., *U. lagopoides* (Burm. f.) DC. He cited the Linnaeus's name as "An *Hedys. lagopodioides*, Linn. spec. 1057" after the citation of Burmann's name suggesting a doubt on the identity between the two. Later, Prain (1897) defined both as identical, but he adopted *U. lagopoides* (Burm. f.) DC. Merrill (1910) clarified nomenclature related to these names and retained the earliest epithet in *Uraría*. He (1923) adopted *U. lagopodioides* (L.) Desv., although the name was attributed to Don as the author of the name in error (Merrill 1910).

Van Meeuwen (1961) considered for the first time the author of the name *Uraría lagopodioides* (L.) Desv. as "(L.) Desv. ex DC. (1825)". Chun and Chang (1965) were also attributed the name to "(L.) Desv. ex DC." in China. Verdcourt (1979) regarded

that *Uraría lagopodioides* (L.) Desv. was published by Candolle (1825), because "Candolle made an erroneous emendation of Linnaeus' epithet which undoubtedly is wrongly spelt". He proposed an emendation for use *Uraría lagopodioides* (L.) Desv. ex DC. [emend. Verdc. 1979]. However, he did not notice on Burman's name and Merrill's treatment. Candolle (1825) proposed his combination apparently based on Burman's name as mentioned above, and his treatment is interpreted that he excluded Linnaeus' name at the same time. We consider therefore that Candolle's name should be cited as *Uraría lagopoides* DC., neither *U. lagopoides* (Burm. f.) DC., *U. lagopodioides* (L.) Desv. ex DC. nor *U. lagopodioides* (L.) DC. Schindler (1928 on page 365) adopted "*U. lagopodioides* (L.) Desv. in Journ. de bot. I (1813) 122", but Desvaux (1813) cited only "*Hedysarum Lagopodioides*" on page 123. Accordingly, the name was not correctly published in 1813. The correct nomenclature for *U. lagopodioides* (L.) Desv. was published first by Merrill (1910, 1923) and Sanjappa (1992), although they did not consider *Hedysarum lagopoides* Burm. f. as superfluous.

6. *Uraría neglecta* Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66: 382 (1897).

[Figs. 8–12]

*Uraría hamosa* Wall. var. *formosana* Matsum. in Sci. Coll. Imp. Univ. Tokyo 12 [in Ito & Matsum., Tent. Fl. Lutchu.]: 411 (1899) [Type: Formosa orientali, Taitoo. Y. Tashiro 10 (TI)]; Hayata, Icon. Pl. Formos. 1: 188 (1911). [Fig. 8]

*Uraría aequilobata* Hosok. in J. Soc. Trop. Agric., Taiwan 4: 202 (1932); C. C. Chuang & C. Huang, Leg. Taiwan Pasture Soil Improv.: 100, fig. 149 (1966); S. F. Huang & T. C. Huang in Taiwania 32: 104 (1987); T. C. Huang & H. Ohashi in Fl. Taiwan ed. 2, 3: 379 (1993); Boufford & al. in Fl. Taiwan ed. 2, 6: 67 (2003).

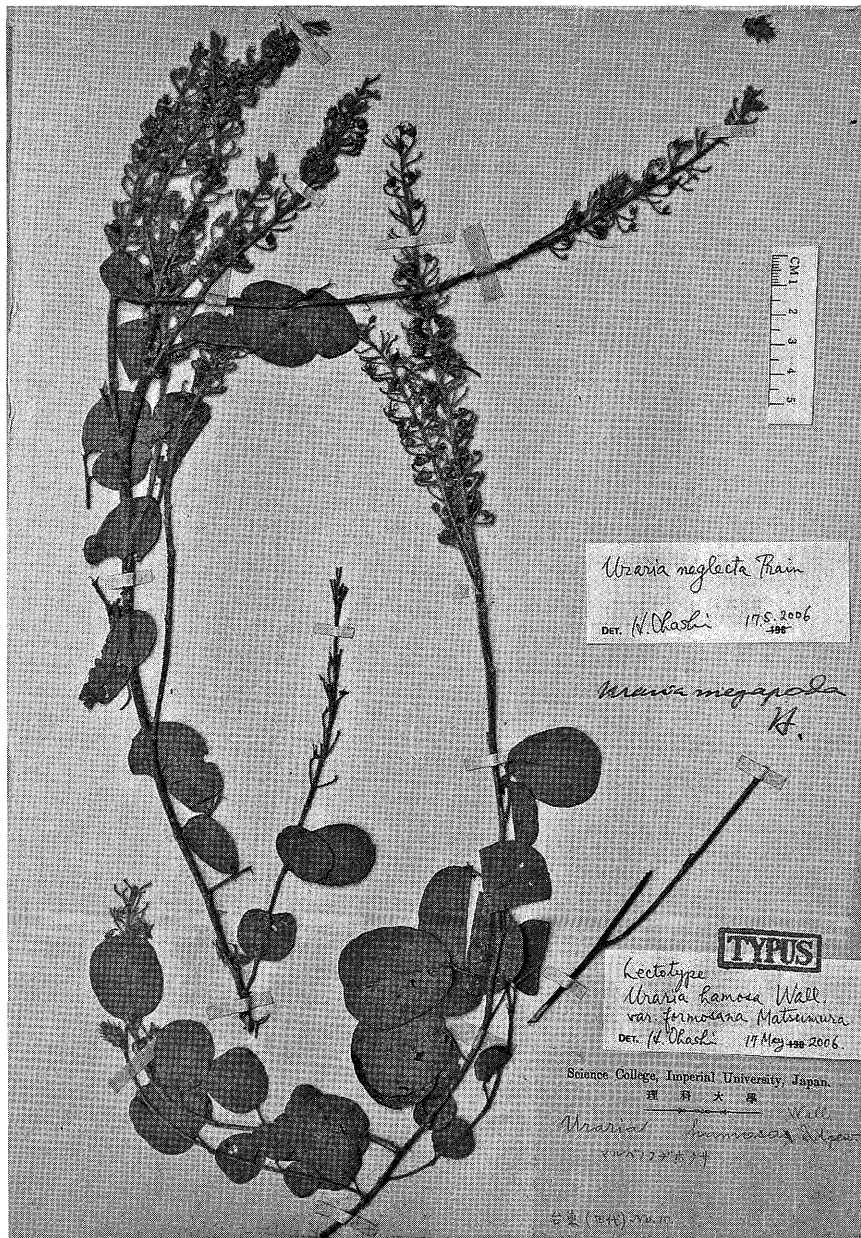


Fig. 8. *Uraria neglecta* Prain. Lectotype of *U. hamosa* Wall. var. *formosana* Matsum. (TI).

*Uraria lagopus* DC. var. *neglecta* (Prain)  
H. Ohashi, Fl. E. Himalya 3: 70 (1975), & in  
H. Hara & Williams, Enum. Flow. Pl. Nepal  
2: 105 (1979); Kumar & Sane, Leg. S. Asia  
Check-List: 218 (2003).

*Uraria fujianensis* Y. C. Yang & P. H.  
Huang in Bull. Bot. Res. N.E. Forest. Inst.,  
Harbin 1(3): 11, fig. 1 (1981); Fl. Fujian. 3:  
149 (1987); Y. C. Yang & P. H. Huang, Fl.  
Reipubl. Popul. Sin. 41: 70, fig. 11 (1995),

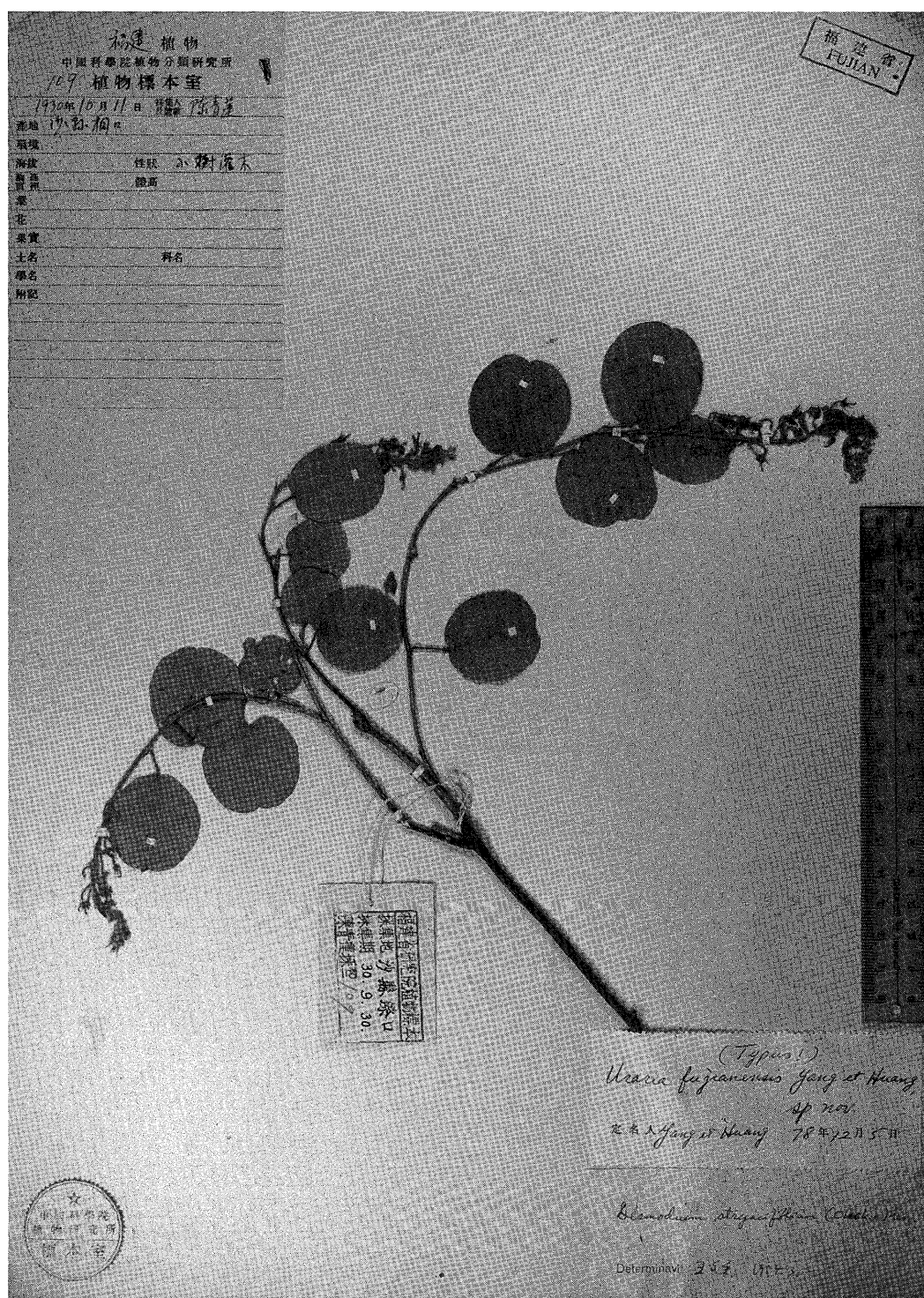


Fig. 9. Holotype of *Uraria fujianensis* Y. C. Yang & P. H. Huang (PE).

syn. nov.

[Fig. 9]

*Uraria longibracteata* Y. C. Yang & P. H. Huang in Bull. Bot. Res. N.E. Forest. Inst., Harbin 1(3): 14, fig. 2 (1981); Fl. Fujian. 3: 150 (1987); Y. C. Yang & P. H. Huang, Fl. Reipubl. Popul. Sin. 41: 73, fig. 12 (1995); P. H. Huang in P. Q. Li et al., Higher Pl. China 7: 171, fig. 257 (2001), syn. nov.

[Fig. 10]

*Uraria hamosa* auct. non Sweet ex Arnott: Henry in Trans. Asiatic Soc. Jap. 24. Suppl. 34 (1896), as "*Uraria hamosa* Wall."; Matsum. in Bot. Mag. Tokyo 16: 74 (1902).

*Uraria lagopodioides* auct. non (L.) Desv.: T. C. Huang & H. Ohashi, Fl. Taiwan 3: 402, p. p., incl. syn. cit. *U. aequilobata* et fig. 658; Y. C. Yang & P. H. Huang in Fl. Reipubl. Popul. Sin. 41: 70 (1995), p. p.

Perennial herbs, erect, rarely prostrate, 40–70 cm tall; stems densely brownish spreading pubescent. Leaves 3-foliolate, sometimes 1-foliolate; petioles (1–)3–7 cm long, densely hairy; rachis 1–2 cm long. Stipules triangular, caudate, 15–20 mm long, 3–5 mm wide, persistent; stipels sublinear, ca. 4 mm long. Terminal leaflets ovate-oblong or ovate to broadly ovate, rarely orbicular, 3–8 cm long, 2.5–5 cm wide, apex obtuse or emarginate, with acumen 1–2 mm long, base obtuse to rounded, upper surface appressed pubescent, glabrescent except on nerves, lower surface densely appressed pubescent; lateral nerves prominent, 10–14 on each side of midrib, ascending, extending to margin, prominently reticulate nerved; lateral leaflets 2–4.5 cm long, 2–3 cm wide.

Inflorescence a terminal or sometimes terminal and axillary, pseudoraceme, densely flowered, 6–40 cm long, ca. 2 cm wide, rachis densely patent hairy with long white glandular hairs (1–2 mm long) and short brown hairs. Bracts early deciduous, broadly ovate, long acuminate, 9–18 mm long, 4–5 mm wide, densely appressed sericeous outside, glabrous inside, densely ciliate. Pedicels geminate, hairy as inflorescence

rachis, 6–7 mm long in flower, 10–12 mm long and upper part upwardly incurved in fruit. Calyx ca. 5 mm long, densely hairy as pedicel, tube 1.5–2 mm long, lobes narrowly triangular, subequal, 2.5–3 mm long. Corolla white, yellow, purple, 4–6 mm long; standard rounded, emarginate or suborbicular, 3–6 mm long; wings subsessile, ca. 4 mm long, 3 mm wide; keel petals curved, claw 1.5–2 mm long, almost as long as standard. Stamens diadelphous. Ovary 6–9 ovulate, glabrous, shorter than or as long as style.

Pods glabrous, with 4–9 articles; seeds brownish, ca. 2 mm long, 1.4 mm wide, 1 mm thick.

Distribution: India, Nepal, Bangladesh, China and Taiwan.

Specimens examined. CHINA. Fujian. Lin Y. 2622 (PE). Guangdong. C. Wang 42538 (PE); S. K. Lau 24315 (PE); T.M. Tsui 651 (A, IBSC, P, TI). Hainan. C. Wang 34908 (A). Jiangxi. S. K. Lau 4413 (A). Taiwan. Taitoo (Taitung). Y. Tashiro 10 (TI, lectotype and isoelectotypes of *Uraria hamosa* Wall. var. *formosana* Matsum.); U. Faurie 8254 (A); Sasaki s. n. 6 Sept. 1931 (TAD). Zhejiang. H.Y. Zou 715 (A).

*Uraria neglecta* Prain was characterized by oblong not cordate leaflets, long dense cylindrical racemes, and subequal lower calyx-lobes (Prain 1897) and it has been known from India and Nepal (Ohashi 1979). It had been included in *U. lagopodioides* (L.) Desv. in Wallich, Cat. no. 5676D, or *U. rufescens* (DC.) Schindl. as *U. hamosa* Wall. in Wallich, Cat. no. 5681C or *U. lagopus* DC. in Baker (1876). On the other hand, Matsumura (1899) described a variety *U. hamosa*, var. *formosana* Matsum. (Fig. 8), from Taiwan based on differences in the leaflets, racemes, pedicels, calyx and pods in comparison with *U. hamosa* described by Baker (1876). This variety is the same as *Uraria neglecta*. The variety was regarded by Schindler (1928) as *Christia campanulata* (Benth.) Thoth. as *Lourea campanulata* Benth., but by Hosokawa (1932) as a distinct species of *Uraria*, *U. aequilobata* Hosok. Hosokawa (1932) distinguished it from *U.*



*rufescens* in having round-obcordate or oblong leaflets with a retuse apex and equally lobed calyx. *Uraria aequilobata* has been adopted in Taiwan as its bibliography cited in the synonymy above, although it was regarded as identical with *Uraria lagopodioides* by Huang and Ohashi (1977) in Taiwan and Yang and Huang (1981, 1995) in China. Yang and Huang (1981, 1995) erroneously treated *U. aequilobata* as different from *U. hamosa*, var. *formosana*. They regarded the latter as identical with *Christia campanulata*. *Uraria neglecta* was also mixed with *U. lacei* or *U. sinensis* in China.

*Uraria fujianensis* Y. C. Yang & P. H. Huang (Fig. 9) was characterized by comparing with *Uraria rotundata* Craib from Thailand, because these species have 1-foliolate leaves with orbicular leaflets. However, *U. fujianensis* is a 1-foliolate form of *U. neglecta*, because they agree well with the inflorescences, flowers and pods. The leaflets of *U. fujianensis* and *U. aequilobata* are also similar to each other.

*Uraria longibracteata* Y. C. Yang & P. H. Huang (Fig. 10) was distinguished from *U. sinensis* and *U. rufescens* in having densely flowered inflorescences, long bracts, hairiness of pedicels, and glabrous pods. These characters agree with those of *U. neglecta* (Figs. 11–12), and in fact *U. longibracteata* is indistinguishable from it.

7. *Uraria picta* (Jacq.) Desv. [in J. Bot. Appl. 1: 123 (1813). comb. nud.] ex DC., Prodr. 2: 324 (1825); Forbes & Hemsl. in J. Linn. Soc. Bot. 23: 178 (1887); Franch., Pl. Delavay.: 171 (1890); Fl. Illust. Pl. Primar. Sinica. Legum. 508, figs. 502A & 503 (1955); Icon. Cormophyt. Sin. 2: 456, fig. 2642 (1972); T. C. Huang & H. Ohashi, Fl. Taiwan 3: 402, fig. 659 (1977); Y. C. Yang & P. H. Huang in Bull. Bot. Res. N.E. Forest. Inst., Harbin 1: 8 (1981); Dy Phon in Fl. Cambodge Laos Vietnam 23: 112 (1987); T. C. Huang & H. Ohashi in Fl. Taiwan ed.

2, 3: 381 (1993); Y. C. Yang & P. H. Huang in Fl. Reipubl. Popul. Sin. 41: 68 (1995); P. H. Huang in P. Q. Li & al., Higher Pl. China 7: 169, fig. 253 (2001). [Fig. 13]

*Hedysarum pictum* Jacq., Collectanea Bot. 2: 262 (1788); Icon. Pl. Rar. 3: 13, tab. 567 (1793).

*Doodia picta* (Jacq.) Roxb., Fl. Ind. ed. 2, 3: 368 (1832).

*Uraria linearis* Hassk. in Flora 25, Beibl. 2(48): 61 (1842).

Perennial herbs, 0.5–2 m tall, erect; stems scabrid with dense hooked hairs. Leaves variable, lowest 2 or 3 leaves 1–5 foliolate with orbicular or broadly ovate leaflets 1.5–3 cm long, succeeding 1–3 leaves 3-foliolate with narrowly ovate leaflets 4–10 cm long 1–2 cm wide, then succeeding upper leaves 5–9 foliolate with linear-oblong leaflets; upper leaflets 7–25 cm long, 0.7–2.5(–4) cm wide, coriaceous, rounded or subcordate at base, obtuse at apex, upper surface glossy, often variegated with whitish central line, lower surface distinctly veined, pale and slightly pubescent, principle lateral nerves 9–11 on each side of midrib, ascending, looped within margin; tertiary nerves reticulate, inconspicuous. Petioles 6–11 cm long (3–7 cm in the lower part); pulvinus 2 mm long, hairy. Stipules widely triangular, 10 mm long, long acuminate; stipels similar, ca. 2 mm long.

Inflorescence a pseudoraceme, terminal, densely flowered, 10–70 cm long, 1.3–2 cm wide; rachis densely hairy with straight and hooked hairs. Peduncles 0–5 cm long, rachis long white hairy with patent hooked hairs. Pedicels geminate, 4–6 mm long in flower, with long white hairs and patent hooked hairs, slightly accrescent, 5–9 mm long and reflexed upward in fruit. Bracts linear, 10–25 mm long, 2–5 mm wide, acuminate to caudate, ciliate, early deciduous. Calyx ca. 5 mm long, tube 2 mm, densely hairy, 5-lobed; lobes unequal, with long spreading hairs; the two upper ca. 2.5 mm long, almost free; 3

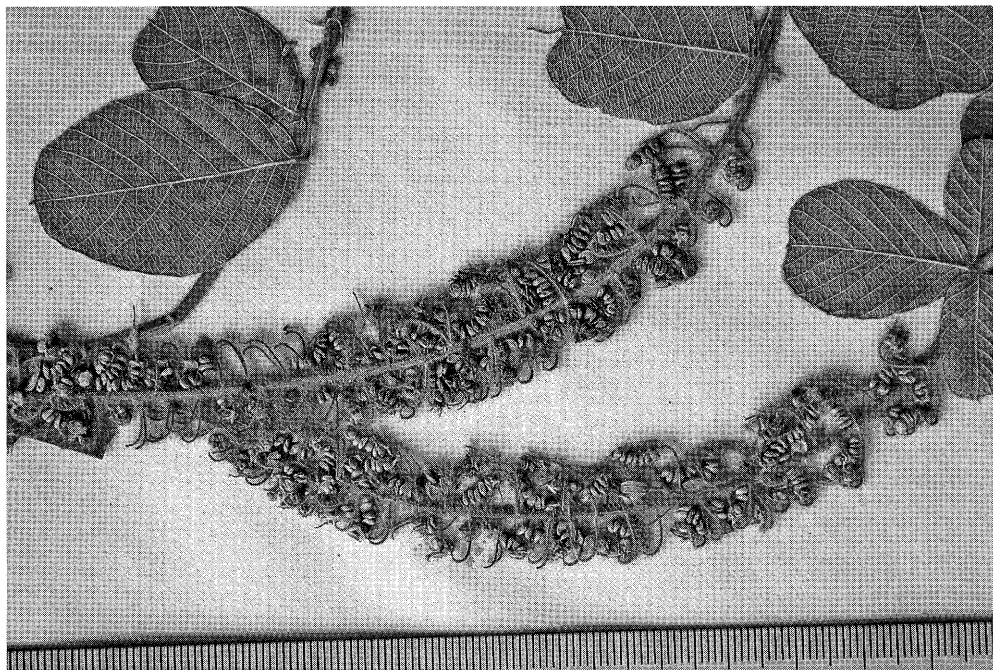


Fig. 12. Inflorescence of *Uraria neglecta* Prain.  
Jiangxi. S. K. Lau 4413 (A).

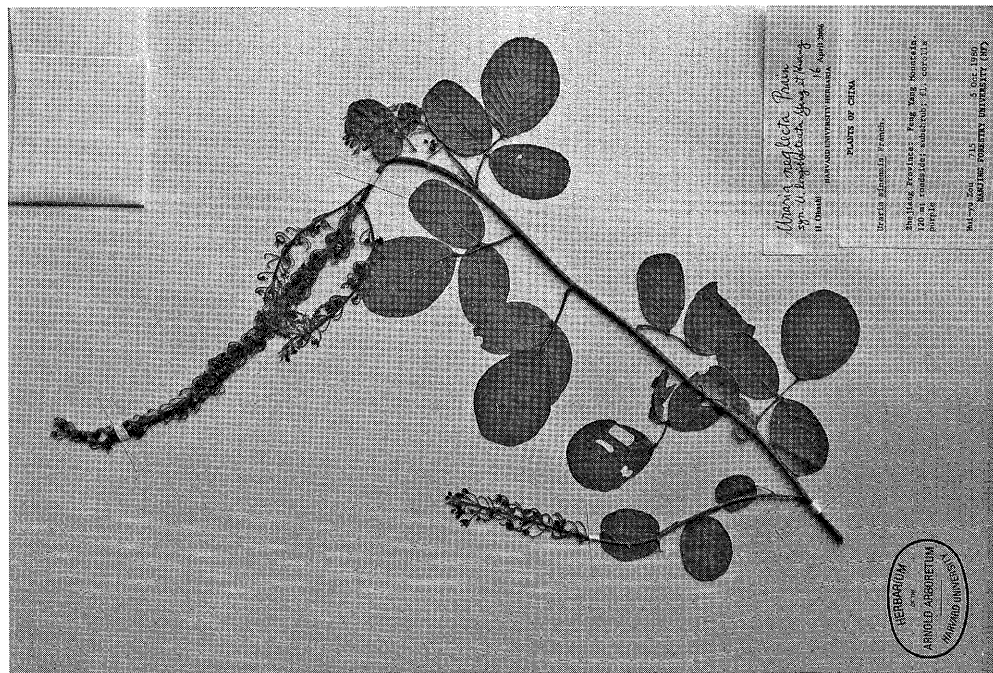


Fig. 11. *Uraria neglecta* Prain. Zhejiang. H. Y. Zou 715  
(A).

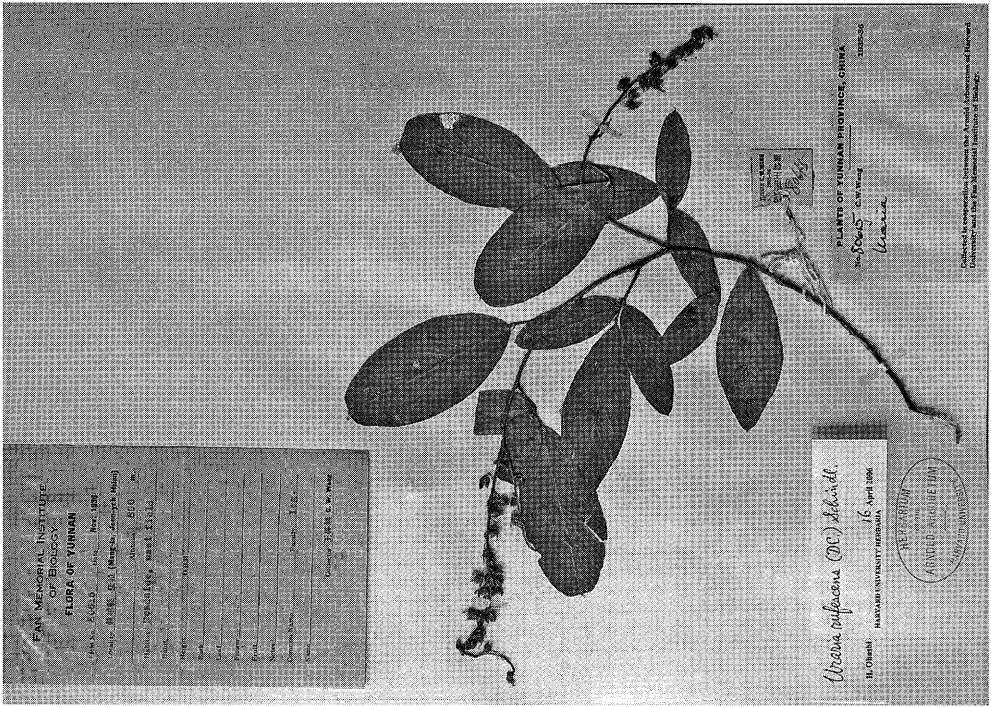


Fig. 14. *Uraria rufescens* (DC.) Schindl. Yunnan. C. W. Wang 80615 (A).

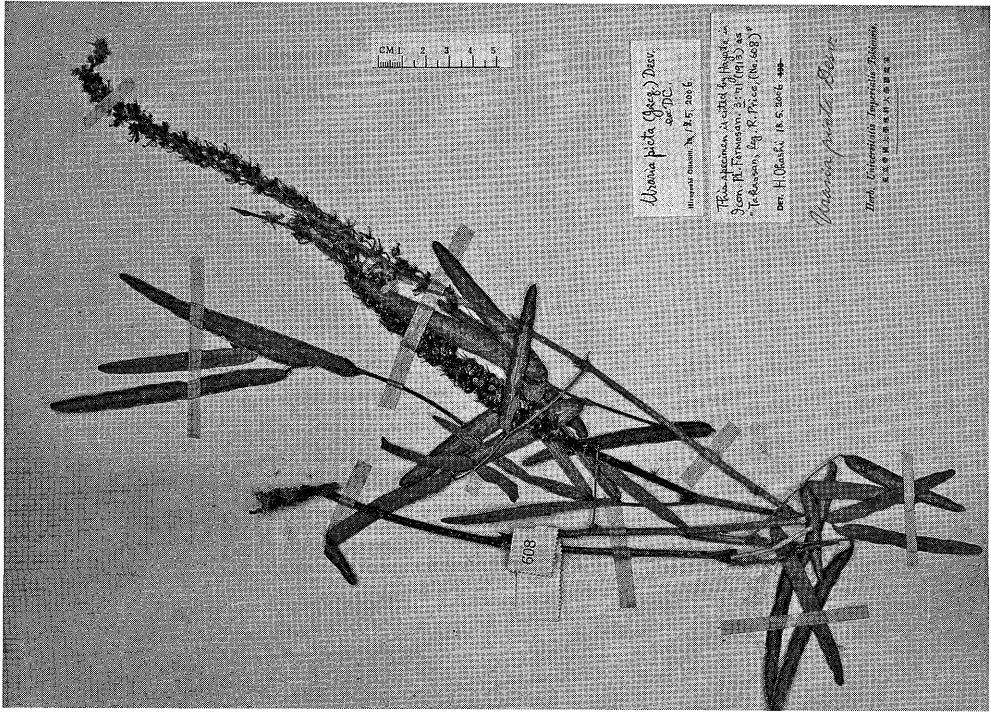


Fig. 13. *Uraria picta* (Jacq.) Desv. ex DC. Taiwan. R. Price 608 (TI).

lower lobes longer, 2–4 mm long. Corolla pink or pale blue, 5–6 mm long; standard obovate, 7–8 mm long, 5 mm wide, long clawed; wings 6.5–7 mm long, as long as keel-petals. Ovary about half as long as style, 5-ovulate.

Pods blackish, glossy, with 3–5 articles; articles 3–3.5 mm long, 3 mm wide; seeds blackish, reniform, ca. 2.5 mm long, 2 mm wide.

Distribution: Tropical Africa, Asia and Australia. Asia: Pakistan, Sri Lanka, India, Nepal, Sikkim, Bhutan, Bangladesh, Myanmar, Thailand, Cambodia, Vietnam, southern China, Taiwan, Japan (southern Ryukyus) and Malesia.

Representative specimens examined: CHINA. **Guangxi.** C. Mnyon s. n. (K). **Taiwan.** G.W. Playface 293 (K); R. Price 608 (TI). **Yunnan.** M. P. Delavay s. n. 13 June 1887 (K).

The figure 19 in table 5 was cited by Desvaux (1813) in the text as “*Hedysarum pictum*, *crinitum*, *Lagopodioides* et l’ *Uraria cercifolia*, Desv. (Fig. 19)”. In Index Kewensis the figure was referred to *U. picta*, and van Meeuwen (1961) regarded it as *U. cercifolia* Desv. ex DC. We agree that the figure is an inflorescence and a pod of *U. cercifolia*. Schindler (1928) attributed the figure to *U. lagopodioides*, but van Meeuwen (1961) erroneously mentioned *U. cercifolia* as a synonym of *U. picta*. We regard the figure as *U. cercifolia* and the species is treated as a synonym of *U. lagopodioides* in this paper.

8. ***Uraria rufescens* (DC.) Schindl.** in Rep. Sp. Nov. Regni Veg. **21**: 14 (1925), p. p. excl. syn. *U. latisejala* Hayata; W. Y. Chun & C. C. Chang, Fl. Hainan. **2**: 284 (1965); Y. C. Yang & P. H. Huang, Bull. Bot. Res. N. E. Forest Inst., Harbin **1**(3): 13 (1981); P. C. Li & C. C. Ni in Fl. Xizang. **2**: 899 (1985); Dy Phon in Fl. Cambodge Laos Vietnam **23**: 108 (1987); Y. C. Yang & P. H. Huang in Fl. Reipubl. Popul. Sin. **41**:

75, pl. 13: 11–19 (1995); P. H. Huang in P. Q. Li & al., Higher Pl. China **7**: 170, fig. 256 (2001). [Figs. 14–16]

*Desmodium rufescens* DC. in Ann. Sci. Nat. (Paris) **4**: 101 (1825) [Type: from East India?]; Prodr. **2**: 335 (1825); Forbes & Hemsl. in J. Linn. Soc. Bot. **23**: 176 (1887).

*Meibomia rufescens* (DC.) Kuntze, Rev. Gen. **1**: 198 (1891).

[*Hedysarum hamosum* Roxb., Hort. Bengal.: 57 (1814), nom. nud.].

*Doodia hamosa* Roxb., Fl. Ind. ed. 2, **3**: 367 (1832) [Type: from E. India. Wallich 5681B (K)].

*Uraria hamosa* (Roxb.) Sweet [Hort. Brit. ed. 2, 149 (1830), nom. nud.; Wall., Cat. no. 5681B & 5681C, p. p. (1831–32), nom. nud.] ex Arnott in Wight & Arnott, Prodr. Fl. Ind. Orient. **222** (1834), as “*Uraria hamosa* Wall.”; Baker in Hook. f., Fl. Brit. Ind. **2**: 156 (1876); Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. **66**: 382 (1897); Gagnep., Fl. Gén. Indoch. **2**: 544 (1920).

*Uraria paniculata* Hassk., Cat. Hort. Bogor. Alter: 273 (1844); Miq., Fl. Ind. Bat. **1**: 270 (1855); Schindl., Repert. Spec. Nov. Regni Veg. Beih. **49**: 367 (1928).

*Meliosma rufescens* (DC.) Kuntze, Rev. Gen. **1**: 198 (1891).

*Uraria gracilis* Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. **66**: 383 (1897); Kumar & Sane, Leg. South Asia Check-list **217** (2003).

Perennial herbs or subshrubs, erect or often procumbent, rarely climbing, ca. 1 m tall. Stems slender, numerous, minutely pubescent. Leaves 3-foliolate, mixed with 1-foliolate, rarely almost all 1-foliolate; leaflets ovate or elliptic, terminal one 4–10 cm long, 2–5 cm wide, lateral ones smaller, apex acute, obtuse, emarginate or rounded-mucronate, base rounded or cordate, upper surface glabrescent except on nerves, lower surface uniformly appressed hairy; principal lateral nerves prominent on lower surface, 11–15 on each side of midrib, ascending, ter-

tiary nerves connect lateral nerves. Petioles 1.5–3 cm long; rachis 1–1.5 cm long, petiolules 1 mm long. Stipules 8–13 mm long, broadly triangular at base, caudate, adaxially pubescent, ciliate; stipels similar, 3–5 mm long.

Inflorescence a pseudoraceme, rarely panicle, more or less loosely flowered, 8–25 cm long, rachis with densely patent hooked hairs mixed with longer straight white glandular hairs. Bracts broadly ovate at base, abruptly long acuminate to caudate at apex, 7–13 mm long, 3–4 mm wide, ciliate. Pedicels geminate, with long glandular hairs but without hooked hairs, 5–6 mm long and ascending in flower, reflexed upward in fruit. Calyx campanulate, hairy with long glandular hairs, tube ca. 1 mm long; lobes subequal, ca. 2 mm long, ciliate with patent long hyaline hairs. Corolla pale blue or violet; standard broadly obovate, ca. 6 mm long, subsessile; wings subsessile, ca. 6 mm long, curved at top; keel petals curved at apex, narrowly clawed, as long as wings. Ovary 2–3 times shorter than style, hairy, 5–8 ovulate.

Pods brownish, with 5–7 articles, minutely hairy, exserted from calyx; articles ca. 2.5 mm long, 2.2–2.5 mm wide. Seeds brown, almost quadrate, ca. 2 mm long, 1.7 mm wide, 1.2 mm thick.

Distribution: Sri Lanka, India, Sikkim, Bangladesh, Myanmar, Thailand, Cambodia, Laos, Vietnam, Indonesia, and southern China.

Specimens examined: CHINA. **Guangdong**. T. W. Tak & W. K. Chow 14186 (A). **Guangxi**. R. C. Ching 7566 (A). **Hainan**. Y. Tateishi & al. 1023032 (TUS). **Yunnan**. C. W. Wang 78794 (A), 79448 (A), 80615 (A); T. T. Yü 18201 (A); K. M. Feng 11854 (A), 12352 (A).

*Uraria hamosa* Sweet as *U. hamosa* Wall. has sometimes been wrongly applied to *Christia campanulata*, *Uraria sinensis*, *U. lagopodioides* or *U. neglecta* (Schindler 1928).

9. *Uraria sinensis* (Hemsl.) Franch., Pl. Delavay. 172 (1890); Schindl. in Hand.-Mazz., Symb. Sin. 7: 571 (1933); Y. C. Yang & P. H. Huang in Bull. Bot. Res. N. E. Forest Inst., Harbin 1(3): 16 (1981), & in Fl. Reipubl. Popul. Sin. 41: 75, pl. 13: 1–10 (1995); P. H. Huang in P. Q. Le & al., Higher Pl. China 7: 171, fig. 258 (2001).

[Fig. 17]

*Uraria hamosa* (Roxb.) Sweet var. *sinensis* Hemsl. in Forbes & Hemsl. in J. Linn. Soc. Bot. 23: 177 (1887), as “*hamosa* Wall.” [Type: China. Ichang. A. Henry 2361 (K lectotype designate here; GH and CAL isoelectotype)].

*Desmodium bonatianum* Pampanini in Nuovo Giorn. Bot. Ital. 17(1): 9 (1910) [Type: China. Yunnan. Maire 88, 206 (syntypes)].

Erect undershrubs 60–120 cm tall; stems pubescent. Leaves trifoliolate; terminal leaflets orbicular, obovate, or oblong, 2–7 cm long 2–5 cm wide, apex obtuse to emarginate or mucronate, base cuneate or rounded; lateral ones similar but smaller than terminal one; lateral nerves prominent, 5–8 on each side of midrib, ascending, extending to margin. Petioles 2–3 cm long. Stipules narrowly ovate, acuminate, 8–13 mm long, 2 mm wide; stipels linear, 2–4 mm long.

Inflorescence a terminal, pseudoraceme, 20–40 cm long, lax flowered; rachis rather densely patent long glandular and short hooked hairs. Pedicels geminate, with long straight white glandular hairs, more or less glabrescent in fruit, 7–8 mm long in flower, 10–17 mm long in fruit. Bracts ovate, 5–7 mm long, ca. 4 mm wide, pubescent, ciliate, acute, caducous. Corolla blue or purple or dark rose, 8–10 mm long. Calyx slender, 5-lobed; tube 2 mm long; 2 upper lobes connate, 2-toothed (teeth ca. 0.5 mm long); 2 lateral lobes ca. 2 mm long, lowest one ca. 3 mm long, with sparsely jointed glandular hairs along the margin of nerves outside. Standard orbicular, 8–10 mm long, 5–8 mm



Fig. 15. Inflorescence of *Uraria rufescens* (DC.) Schindl.  
Guangxi. R. C. Ching 7566 (A).

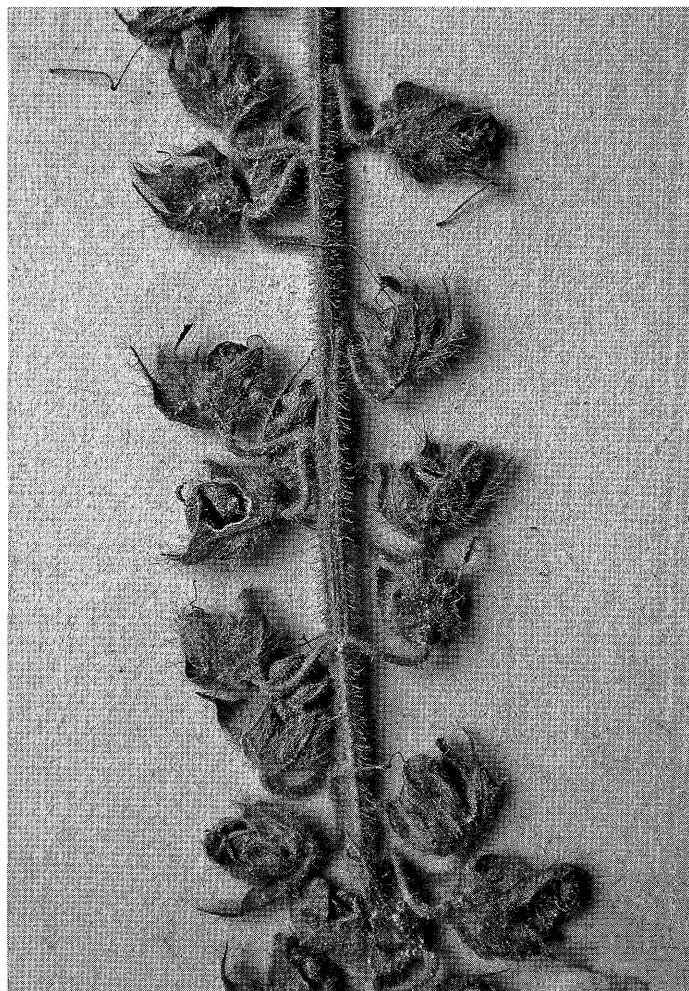


Fig. 16. Pods of *Uraria rufescens* (DC.) Schindl.  
Guangdong. T. W. Tak & W. K. Chow 14186 (A).



Fig. 17. Isolectotype of *Uraria hamosa* Wall. var. *sinensis* Hemsl. China. Ichang. A. Henry 2361 (GH).

wide, clawed, with a brownish stain at base; wings curved, short clawed; keel petals with long claw, ca. 7 mm long, apiculate at apex, claw ca. 2.5 mm long. Ovary 6–7 ovulate, 6

mm long, hairy; style 7 mm long.

Pods with 5–7 articles, with glandular hairs especially on sutures, glabrescent; articles ca. 3 mm long, 2.5 mm wide; seeds yel-

lowish, ca. 2.5 mm long, 1.8 mm wide, 1.4 mm thick.

Distribution: Bhutan and China.

Representative specimens examined: CHINA. **Guangdong.** Tsang & al. 3233 (NA), 15094 (USNC). **Guizhou.** Y. Tsiang 6556 (A), 6755(A); S. W. Teng 90715 (A). **Hainan.** Liang 66560 (A, K). **Hupei.** Ichang. Henry 2361 (CAL and GH **islectotype**, K **lectotype**), Henry 3137 (K **syntype** of *Uria hamosa* Wall. var. *sinensis* Hemsl.). **Sichuan:** Liang 66560 (K); Schneider 837 (GH); H. Smith 1799 (A); Wilson 2935 (A). **Yunnan.** Forrest 20581 (A), 66560 (K); Schneider 837 (K); d'Alleizette s. n., 7, 1908 (P); Cavalerie 1453 (K, P); Delavay 1959 (P), Ducloux 569 (P), 3755 (P), 7399 (P); Forrest 14824 (K, P), 20581 (A, K); Howell 93 (P); Maire 23 (P), 236 (P); Rock 6954 (P), 6963 (GH, P), Ten s. n., 1920 (P); Henry 9434 (A), 9434A (A, CAL), 13481 (A); McLaren' collectors u.114 (A); K. M. Feng 2707(A); J. Murata & F. Yamazaki 9024 (TI, TUS), J. Murata & F. Yamazaki 9136 (TI, TUS); F. Maekawa 25752 (TUS). **Xizhang.** R. P. Soulie 1059 (A, NA); K. Wong 15041 (K); Monbeig s. n., 17.8.1909 (K, P).

*Uria hamosa* Wallich. var. *sinensis* Hemsl. was characterized by Hemsley (1887) in having obovate, rotund leaflets, lax flowered pseudoraceme and long pedicels. There are two syntypes in Kew, i. e. Henry 2361 and Henry 3137. We select Henry 2361 (Fig. 17) as lectotype, because this specimen shows long pedicels clearer than another syntype.

### Excluded species described from China

*Uria esquirolii* H. Lévl. in Repert. Spec. Nov. Regni Veg. **12**: 191 (1913) [Type: China. Guizhou. Esquirol 2544 (E holo, A photo)]. This is a synonym of *Nogra grahamii* (Wall. ex Benth.) Merr. (Lauener 1970, Ohashi and Iokawa 2006, in press).

*Uria formosana* (Hayata) Hayata, Icon. Pl. Formos. **9**: 26 (1920) = *Desmodium formosanum* Hayata in J. Coll. Sci. Tokyo **30** (1) [Mater. Fl. Formos.]: 77 (1911). [Type: Taiwan. Banchoryô, Juchori. Nakahara 586 (TI holo)]. This is a synonym of *Christia campanulata* (Benth.) Thoth.

*Uria henryi* Schindl. in Repert. Spec. Nov. Regni Veg. **21**: 15 (1925) [Type: China. Yunnan. Mengtze. A. Henry 9342 (A lectotype designated by Ohashi et al. in J. Jpn. Bot. **77**: 84. 2002)]. This is a synonym of *Desmodium hispidum* Franch. (Ohashi et al. 2002).

*Uria latisejala* Hayata, Icon. Pl. Formos. **3**: 70 (1913) [Type: Taiwan. Mt. Tohozan, ad 6500 ped. Alt. T. Kawakami & S. Sasaki s.n. 6 Oct. 1909 (TI holo)]. This is a synonym of *Christia campanulata* (Benth.) Thoth.

### Conclusion

Our results are shown in comparison with those of Yang and Huang (1981, 1995) as in Table 1.

Table 1. List of Chinese *Uria* by Yang and Huang (1981, 1995) and the present study

| Yang and Huang (1981, 1995)                         | Present study (new treatment in bold)  |
|---|--|
| <i>Uriopsis brevissima</i> Y. C. Yang & P. H. Huang | <i>Uria cochinchinensis</i> Schindl.   |
| <i>Uriopsis cordifolia</i> (Wall.) Schindl.         | <i>Uria cordifolia</i> Wall.           |
| <i>Uria clarkei</i> (Clarke) Gagnep.                | (synonym of <i>U. lacei</i> )          |
| <i>Uria crinita</i> (L.) Desv. ex DC.               | <i>Uria crinita</i> (L.) Desv. ex DC.  |
| <i>Uria lacei</i> Craib                             | <i>Uria lacei</i> Craib                |
| <i>Uria lagopodioides</i> (L.) Desv. ex DC.         | <i>Uria lagopodioides</i> (L.) Desv.   |
| <i>Uria fujianensis</i> Y. C. Yang & P. H. Huang    | <i>Uria neglecta</i> Prain             |
| <i>Uria picta</i> (Jacq.) Desv. ex DC.              | <i>Uria picta</i> (Jacq.) Desv. ex DC. |
| <i>Uria rufescens</i> (DC.) Schindl.                | <i>Uria rufescens</i> (DC.) Schindl.   |
| <i>Uria longibracteata</i> Y. C. Yang & P. H. Huang | (synonym of <i>U. neglecta</i> )       |
| <i>Uria sinensis</i> (Hemsl.) Franch.               | <i>Uria sinensis</i> (Hemsl.) Franch.  |

We would like to thank the directors and staff of the herbaria listed at the beginning of this paper for loan or access to their collections. We are grateful to D. E. Boufford, A. Brach and E. Wood (Harvard University Herbaria), G. Lewis, B. Schrire and L. Rico Arce (K), X. Y. Zhu (PE) and J. Murata (TI) for their help in our herbarium works and for references.

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# 大橋広好, 五百川 裕, P. デイホン: 中国のマメ科フジボグサ属

マメ科フジボグサ属 *Uraria* Desv. ex DC. は中国名を狸尾豆属といい, 中国全体の種類を初めて研究した Y. C. Yang and P. H. Huang (1981) は中国に 9 種を認めている. また, 近縁の *Urariopsis* (中国名算珠豆属) に 2 種ありとしている. これらの結果は彼らによって中国植物志41巻 (1995) の中にまとめられている. 一方, T. C. Huang and Ohashi (1993) は台湾のフジボグサ属をまとめ, ここに 4 種を認めて, その中の *U. aequilobata* Hosok. を台湾と香港に固有の 1 種として記録している. *U. aequilobata* は Yang and Huang (1981) では広布種 *Uraria lagopodioides* (L.) Desv. ex DC. の異名とされているが, これは Huang and Ohashi (1977) の扱いと同じである. さらに広西省からも 1 新種 *Uraria guangxiensis* W. L. Sha が追加されているが, これは中国植物誌41巻 (1995) に記録されていない. これらの記録を整理してみると, 台湾を含めて中国にはフジボグサ属として 11 種, *Urariopsis* として 2 種が認められていることになる. 本研究ではフジボグサ属と *Urariopsis* の中国産全種について再検討を試みた.

まず始めに属についてみると, われわれは *Urariopsis* はフジボグサ属と同一属と考える (De Haas et al. 1980, Dy Phon 1987, Ohashi 2005). したがって中国のフジボグサ属は合計 13 種があることになる.

中国固有種として Yang and Huang (1981, 1995) は 1 種, T. C. Huang and Ohashi (1993) は 1 種, W. L. Sha (1994) は 1 種を記録している. それぞれの固有種について検討した結果, *Uraria aequilobata* Hosok. (= *U. hamosa* Wall. var. *formosana* Matsum.),

*U. fujianensis* Y. C. Yang & P. H. Huang および *U. longibracteata* Y. C. Yang & P. H. Huang はネパールとインドに分布する *U. neglecta* Prain と同種であり, *Urariopsis brevissima* Y. C. Yang & P. H. Huang はインドシナに分布する *Uraria cochinchinensis* Schindl. と同種であることが判明した. また, *Uraria guangxiensis* W. L. Sha はインドから中国南部に分布する *U. lacei* Craib と同種であると考えた. 結局, 中国にフジボグサ属の固有種はないと考えられる.

その他の種について検討してみると, Yang and Huang (1981, 1995) の研究では別種とされている *Uraria clarkei* Gagnep. と *U. lacei* Craib は同種であると考えられる. また, *Uraria lagopodioides* の著者名は“(L.) Desv. ex DC.” が広く使われているが, 正しい著者名は“(L.) Desv.”であることを示した. *Uraria lagopodioides* (L.) Desv. はインド, 東南アジア, 中国南部, 台湾, 太平洋諸島からオーストラリア北部に広く分布するが, この学名の基礎異名である *Hedysarum lagopodioides* L. のタイプは中国からと記録されている.

以上の結果, 中国産のフジボグサ属は 9 種に分類されることを示した. それらについて正名と異名を整理し, それぞれの主に中国の文献を挙げ, 各種について記載をつけ, また証拠標本を引用した. 最後に, Yang and Huang (1981, 1995) の結果と本研究の結果を比較して学名の異同を表 1 にまとめた.

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